# INDEX OF AUTHORS' NAMES.

#### ABSTRACTS, 1885.

And also to Transactions, 1885 (marked Trans.); and to such papers as appeared in Abstract of Proceedings but not in Transactions (marked Proc.).

#### A.

Abney, W. de W., and R. Festing, absorption spectra thermograms, 1175.

relation between energy and radiation in the spectrum of incandescence lamps, 325.

Albertoni, K., action and metamorphoses of some substances in the organism in relation to diabetes, 683.

Albitzky, A., β-dipropylacrylic acid, 242.

refractive power of the hydrocarbon C<sub>12</sub>H<sub>20</sub>, 211.

Aitken, A. P., report on ensilage and manuring beans and barley, 1255.

Alekhine, A., anhydrides of mannitol, 744.

Alexéeff, P., action of light on nitrocumic acid, 794.

derivatives of azocumic acid, 390.

Alexéeff, W., reciprocal solution of

liquids, 340.
—— stability of compounds, 114.

Allen, A. H., estimation of ethyl nitrite in spirit of nitrous ether, &c., 1013.

Allen, A. W. See Norton.

Allen, W., and A. Kölliker, derivatives of triphenylcarbinyl bromide, 655.

Allihn, F., apparatus for filtering in a vacuum, 631.

Amagat, E. H., correction of the results given in a paper on compressed gas manometers, 341.

—— density and atomic volumes of oxygen and hydrogen, 631.

Amthor, C., caramel, 604.

nuclein of grape stones, 823.

Ancel. See Bauer. Andeer, J., phlorglucinol as an anti-

septic, 454.

VOL. XLVIII.

Andés, L. E., preparation of wood stains in the solid form, 711.

Andouard, A., estimation of gum arabic in syrup, 299.

Andouard, A., and V. Dézaunay, influence of exhausted beet root pulp on cow's milk, 73.

Andrae, desiccation of seed potatoes,

André, G., ammonio-cupric sulphate and a basic cupric sulphate, 873.

basic and ammoniacal nitrates,

—— ammonio-zinc sulphates, 485.

André. See Berthelot.

Andreae, J. L., method for estimating the specific gravity of solid substances soluble in water, 332.

- specific gravity of saturated solutions of solid substances at various temperatures, 334.

Andrews, T., electromotive force between metals at high temperatures, 1175.

Anrep, B. v., physiological action of ptomaines, 682.

Anschütz, R., action of phosphoric chloride on salicylic acid, 1061.

--- formation of the anhydrides of mono- and di-basic acids, 243.

—— formation of methyl racemate from methyl dextro- and lævo-tartrates, 966.

—— malic acids, 1049.

mew method of preparing aromatic hydrocarbons, 1064, and TRANS., 898.

—— pipitzahoic acid, 776.

—— racemic acid, and the calcium salts of the four tartaric acids, 243.

 replacement of two chlorine atoms in chlorides by means of anhydrous oxalic acid, 263. Anschütz, R., and C. Hintze, diammonium oxalate, 1049.

Anschütz, R., and H. Immendorff, action of aluminium chloride, 269.

- preparation of homologues of benzene by aid of aluminium chloride, **7**69.

Anschütz, R., and A. Kekulé, useful apparatus, 1035.

Anschütz, R., and F. Klingemann, preparation of malic acid from citric acid, 1050.

Anschütz, R., and W. Leather, derivatives of pipitzahoic acid, 777. Anschütz, R., and P. Meyer, amido-

and hydroxy - phenanthraquinones,

Anschütz and E. Romig, action of aluminium chloride on mixtures of ethylidine chloride with benzene, toluene, or metaxylene, 768.

 — nitration products of diphenylethane, 800.

Anschütz, R., and Q. Wirtz, decomposition of aromatic salts of fumaric acid, 1064, and TRANS., 899.

Antrick, O., benzylindole, 543.

compounds of diacetonamine with aldehydes, 502.

Antrick. See also Knorr.

Archbutt, L., free scid in oil's, 446.

Arche, A., and C. Hassack, analysis of some Indian bronzes and their patina, 100.

Aristoff, V., oxidation of acids of the

Aristoli, v., Oaldand of description of lactic series, 752.

Armstrong, H. E., constitution of the fulminates, Trans., 79.

Armstrong, H. E., and A. K. Miller, products of the manufacture of gas from petroleum, Proc., 77.

Arnaud, M., colouring matter of leaves, 670.

Arnold, C., estimation of chlorides in urine, 835.

estimation of nitrogen, 837.

Kjeldahl's method of nitrogen estimation, 930.

Arons, L., heat of dilution and specific heat of saline solutions, 1101.

Arth, G., action of anhydrous ammoniacal ammonium nitrate on metals,

Arzruni, A., groddeckite, a new zeolite, 32.

minerals from a chromite deposit,

- sulphur from Zielenzig, 27.

Atanasesco, analysis of artificial brochantite, 1117.

Atwater, W. O., acquisition of atmospheric nitrogen by plants, 1005.

Aubert, L., and V. Girard, manufacture of cane-sugar from starch, 1274.

Aubert, P. See Lépine. Aubin, E., estimation of phosphoric acid, 1093.

Aubin. See also Müntz.

Audouard, analysis of phosphatic manures, 838.

Audoynaud, A., and E. Zachare-

wicz, farmyard manure, 834, 1260. Austen, P. T., and F. A. Wilber, purification of drinking water by alum,

Auwers, K., pseudocumenol, 380.

#### В.

Baeyer, A., polyacetylene compounds, 759, 1198.

Baginsky, A., occurrence of xanthine, guanine, and hypoxanthine, 286.

use of milk preserved by high temperatures for children's food, 679. Baker, H., orthovanadates of sodium,

&c., TRANS., 353.

Baker, H. B., combustion in dried gases, TRANS., 349.

Bakker, H. P., tengkawang fat or vegetable tallow, 710.

Balbiano, L., derivatives of bromanisic acid, 530.

Balmer, J. J., spectrum lines of hydrogen, 1025.

Bamberger, E., colour reactions of orthodiketones, 807.

mixed azo-compounds, 157.

— retene, 549.

Bamberger, E., and S. C. Hooker, retene, 905.

---- constitution of retene, 1070. Bamberger, E., and J. Kranzfeld, chrysene, 1069.

Barbaglia, G. A., parabuxinidine, a fourth alkaloid from Buxus sempervirens, 177.

thiovaleraldehyde, 136.

Barbier, E., relation between the ordinary thermometer and the weight thermometer, 111.

Barbieri. See Sachs. Barker, G. F., and others, report on glucose, 206.

Barnes, J., separation of metals precipitated by hydrochloric acid, 597.

Barrois, chloritoid from Morbihan, 1118.

Barth, M., abnormal fermentation under unfavourable circumstances,

- specific influence of acetic acid on the fermentation of must, 942.

Barth, J., and L. Schreder, substances formed by the fusion of quinol with soda, 520.

Bartoli, A., capillary constants of liquids and cohesion of solids, 866.

conductivity of cetyl alcohol, 855. - electrical conductivity of carbon compounds, 624.

 impermeability of glass to gases, 869. relation between fusing and boiling points, 859.

Bartoli, A., and E. Stracciati, critical volumes of paraffins, 859.

— Mendeléeff's formula for the expansion of liquids, 859.

Barzilovsky, J., oxidation of aromatic diamines, 525.

Battut, L., estimation of sugars and glucoses, 693.

sulphurous anhydride in sugar refining, 709.

Bauer, H., boiling point anomalies of the chlorinated acetonitriles and their derivatives, 1120.

Bauer, M., L. Brouard, and J. Ancel, vegetable leather, 851.

Bauer, R., azobenzenethiosulphonic acid: azobenzenesulphonic acid, 1139. Bauer, R. W., sugar from Agar-Agar,

Baum, J., simple method for preparing hippuric acid and allied compounds, 981.

Baum. See also Schotten.

Baumann, E., compounds of mercaptans with aldehydes, ketones, and ketonic acids, 748.

derivatives of pyruvic acid, 513. Baumann. See also Nölting.

Baumert, G., lupinidine from Lupinus

luteus, 177. behaviour of lupinidine with ethyl

iodide, 676. Baumhauer, E. H. v., simple form of thermo-regulator and registering thermometer, 471.

— the Ngawi meteorite, 1190.

Baumstark, F., new method of proximate resolution of the brain substance, 918.

Béchamp, A., optical inactivity of cellulose, 500.

 optical inactivity of cellulose and the rotary power of pyroxylin, 237.

 organisms which produce zymases, 580.

 origin of microzymæ and vibrioles, 417.

-rotary power of solutions of cellulose in Schweizer's reagent, 369. Béchamp, J., and A. Dujardin, the zymase of jequirity, 1085.

Bechi, detection of cotton seed oil in olive oil, 301.

Beckenkamp, J., the coefficients of elasticity of crystals, 729.

Becker, F., aluminium sulphate, 1271. estimation of tannin, 934.

Beckurts, H., estimation of arsenic in judicial cases, 439.

 hydrochloric acid in Marsh's apparatus, 440.

preparation of hydrochloric acid free from arsenic, 440.

separation of alkaloïds in forensic analysis, 701.

- strychnine, 675.

— strychnine and brucine, 911.

Beckurts, H., and R. Otto, action of heat and water on the halogen substituted acids of the  $C_nH_{2n}O_2$  series,

- monohalogen-derivatives of acrylic acid, 509.

Beckurts. See also Otto.

Becquerel, E., spectroscopic study of compounds rendered phosphorescent by the action of light on electrical discharge, 1098. Beetz, W. v., constant element for

electrical measurements, 2.

Béhal, A., separation of copper and cadmium, 1012. Behrend, P., changes occurring in

barley during malting, 617.

Behrend, R., derivatives of carbamide,

Behrmann, A., and A. W. Hofmann, amides of citric acid and their conversion into pyridene-derivatives, 138.

Beilby, G., preparation of ammonia from nitrogenous minerals, 304. Beilstein, F., and E. Wiegand,

angelic and tiglic acids, 42.

- unsaturated compounds of the fatty series. 740.

Bell, L., absorption spectrum of nitrogen peroxide, 949.

spectroscopic determination of lithium, 1012.

Bellamy, F., action of some metals on mixtures of acetylene and air, 951.

Belohoubek, A., colouring matters from ebony wood, 396.

Bémont. See Étard. Benas, T., new tin salts, 727. volumetric estimation of tin, 839.

Benckiser. See Nietzki.

Bender, C., saline solutions, 12. Benedikt, R., and C. Hazura, morin,

Benedikt, R., and P. Julius, a new resorcinol blue, 386.

Benedikt. See also Weselsky.

Benoist. See Collin. Beran, A., paramidoctylbenzene, paramidocaprylbenzene, and amidoctyltoluene, 523.

Berchem, P. de, ditolyl phthalide,

Berend, L., dimethylquinoline, 274. trimethylquinoline, 558.

Berendes. See Fleischmann. Berger, F., action of acetamide on phenyl-cyanamide, 387.

Berglund, E., separation of chlorine and bromine, 836.

- separation of tin, antimony, and arsenic, 839.

- Vortman's method for estimating chlorine in the presence of bromine,

Berju, G., derivatives of amidoazobenzene, 660.

Berlinerblau, J., action of cyanogen chloride on ortho- and paramido-phenetoil, 147.

Bernheimer. See Nasini.

Bernreuther, C., steeping of barley, 1273.

Bernthsen, A., ammonium bases derived from quinoline, 814.

methylene-blue and allied dyes, 259.

Bernthsen, A., and W. Hess, quinolineammonium bases, 558.

Bernthsen, A., and A. Semper, juglone, 546.

Bernthsen. See also Hess.

Berthelot, action of bromine on chlorides, 632.

- chemical neutrality of salts, 472. - isomerism in the benzene series,

--- principle of maximum work, 868. --- rate of propagation of detonation

in solid and liquid explosives, 478. -- thermo-chemistry of phosphorus

trifluoride, 328. - volatility of sulphur and mercury,

Berthelot and André, carbonates in

living plants, 1086. -formation of nitrates in

plants, 581. - oxalic acid in plants, 1164.

Berthelot and Vieille, heat of combustion of charcoal and organic compounds, 326.

- specific heat of gaseous element at high temperatures, 7.

- specific heat of steam and carbonic anhydride at high temperatures, 7.

Berthelot and Werner, bromine substitutions of polyhydric phenols, 627.

Berthelot and Werner, heats of formation and transformation of the hydroxybenzoic acids, 1103.

- heat of neutralisation of

hydroxybenzoic acids, 1032.

isomerism in the benzene series: heat of neutralisation of polyhydric phenols, 628.

Bertoni, G., mineral water of Acquarossa, 494.

Beseler, O., and M. Märcker, cultivation of varieties of oats, 1008.

Beutell, A., the potash soda felspars of Silesia, 31.

Bevad, J., rate of formation of the carbonates of the alkaline earths in

relation to time, mass, &c., 480. Bevade, solubility of lithium carbonate, 634.

Beyer, C., derivatives of mandelic acid, 982.

- x-y-dimethylquinoline, 1246.

— homologue of quinoline, 672.

Beyer and Kegel, preparation of dinitrophenolsulphonic acid, 269.

Bezold, W. v., cohesion figures, 335. Biedert, F., albuminoïds of human

milk, 922.

Bignamini, estimation of saccharose, glutose, and lactose, 443. Binder. See Nölting. Bindewald. See Zincke.

Birnie, S., decomposition of ferrous oxalate, 752.

Bischoff, C. A., and C. Rach, derivatives of orthonitrobenzoic acid, 263.

- --- ethyl acetylenetetracarboxylate, 244.

- - symmetrical dimethylsuccinic acid, 885.

Bishop, W., analysis of honey, 444.

Bistrzycki, A., and S. v. Kostanecki, new isomeride of euxanthone, 1077.

Bizzarri, D., hydroxycoumarin, 901. Bladin, J. A., action of cyanogen on

aromatic diamines, 256. - cyanogen compounds of the aro-

matic diamines, 784, - derivatives of dicyanphenylhydrazine, 980.

Blair, A. A., valuation of acetate of lime, 1014.

Blake, F. H., vanadinite in Arizona, 489.

Blake, W. P., columbite in the Black Hills of Dakota, 360.

- crystallised gold in prismatic forms, 487.

Blank. See Knorr.

Blattner, G., decomposition of ammonium sulphate by means of sodium sulphate of, 613.

Bleekrode, L., indices of refraction of liquefied gases, 467.

Blount, B., cause of the decrepitations in "explosive pyrites," TRANS.,

Bloxam, C. L., detection of iron, aluminium, &c., 1264.

- estimation of manganese in castiron or spiegeleisen, 84.

- some reactions of silver cyanide,

Blümcke, A., determination of the specific gravity of carbonic acid solutions, 215.

- influence of concentration on the specific heat of aqueous and alcoholic solutions of metallic chlorides, 8.

- specific heat of aqueous alcohol, 103Î.

specific heat of concentrated soda solutions, 1101.

specific heat of uranium, 625.

Blümlein, F. O., action of bromacetophenone on amides, 162.

 brominated phthalic acids, 162. Bochefontaine and O. de Coninck,

physiological action of  $\beta$ -collidinehexahydride, 681.

Bochefontaine. See also Sée.

Bocklisch, O., ptomaines from fish, 566, 1146.

Bodewig, C., nephrite from Tasmania,

Bodewig, C., and G. v. Rath, colemanite from California, 957.

Bodewig. See also La Coste.

Böhm, L., and O. Schwenk, putrefaction of albumin in the alimentary canal of Herbivores, 284.

Böhm, R., chemical and toxicological relations of certain fungi, 1008.

Boessneck, P., condensation of chloral hydrate with tertiary amines, 976.

Böttcher, W., migrations in benzene ortho-di-derivatives, 658.

Böttger, silvering of glass, 847. Böttinger, C., condensation products

of pyruvic acid, 758. - preparation of thiolactic acid, 752.

— pyridinetricarboxylic acid, 1144.

Bohland, K., estimation of nitrogen in urine, 609.

Bohland. See also Pflüger.

Bohlig, E., action of silver nitrate on pure potassium monocarbonate, 1111. - solubility of glass, 688.

Boillot, A., heat of combination of hydrogen and oxygen, 8.

Boisbaudran, L. de, action of hydrogen peroxide on cerium and thorium,

--- alloys of indium and gallium, 638.

Boisbaudran, L. de, fluorescence of rare earths, 1174.

- new order of metallic spectra, 949.

----- spectrum of ammonia, 1025.

- spectrum of samarium, 621.

Bondi. See Weinreb.

Bongartz, J., volumetric estimation of phosphoric acid, 438.

Bonnier, G., and L. Mangin, exchange of gases between lichens and the atmosphere, 580.

Bonz, R., bromination of  $\alpha$ - and  $\beta$ -thiophenic acids, 1206.

derivatives of ethylthiophen, 766. - synthesis of thiophendicarboxylic

acid, 1207. Booth, J. C., graphite crucibles, 616.

- toughening gold, silver, &c., in the crucible, 462.

Boquillon, H., action of chlorine on isobutyl alcohol, 961.

Borden. See Wood. Bosshard, E., Kjeldahl's method of estimating nitrogen, 837.

Bosshard. See also Schulze.

Bostwick, A. E., influence of light on the electrical resistance of metals,

Bottomley, J. T., condensation of gases on the surface of glass, 477.

- Daniell's cell of small internal resistance, 469.

Bouchardat, G., glycol and glycolmonochlorhydrin, 498.

Bouchardat, G., and J. Lafont, essence of lemon, 1141,

Bourgoin, E., solubility of mercuric. iodide in water and alcohol, 350.

Bourquelot, E., diastase, 927.

- differences between pepsin and trypsin, 408.

- fermentation of invert sugar, 1085. selective fermentation, 1003.

Bourquin. See Nencki.

Boursier and St. André, manuring potatoes with potash salts, 833.

Boussingault, temperature of hailstones, 685.

Bouty. See Cailletet.

Bradbury, C. M., garnet (var. Spessarite), from Amelia Co., Virginia, 227.

Bradford, S. S., basic lead acetate as a test for olive oil, 603.

Brame, C., pseudoquadratic hedrons of sulphur, 1182.

Brass. See Wallach.

Brasse, L., action of the diastase of

— presence of amylase in leaves, 182.

Braun, H., titration of carbamide with mercuric nitrate, 702.

Brauner, B., chemistry of the cerite metals, Trans., 879.

Bredt, J., camphoronic acid, 395.

Bremer, G. J. W., change of specific rotatory power under the influence of various solvents, 622.

Breuer. See Zincke.

Brieger, L., bacteria, 578.

- basic products (ptomaines) from human corpses, 278.

Briem, H., absorption of water by beetroots, 928.

Brito, P. S., method of testing for iodine in presence of large quantities of bromine, 189.

Brix, R., exchange of chlorine, bromine, and iodine between organic and inorganic compounds, 34.

Brouard. See Bauer.

Brouardel, P., and P. Loye, poisoning by hydrogen sulphide, 1151.

Brown, H. T., and G. H. Morris, non-crystallisable products of the action of diastase on starch, TRANS.,

Brown, J., formation of a stalactite by

vapour, 1034. Brown, W. G., a new hydrous manganese aluminium sulphate, from Sevier Co., Tennessee, 226.

 cassiterite from Irish Creek, Rockbridge Co., Virginia, 488. Bruce, J. D., analysis of cassiterite

from King Co., N. Carolina, 126.

marmalite from Himmelfahrt Mine, Freiburg, 222.

- silver hydroxide, 124.

Brügelmann, G., on crystallisation,

Brünig, A., yield of butter from fresh and stale cream, 620.

Brun, A., a crystal of stibnite from Japan, 221.

Brunner, H., azoresorcinol and azoresorufin, 776.

Brunner, H., E. andChuard,  $\beta$ -amidoalizarin, 806.

Brunner, H., and W. Robert, colouring matters from phenols, 525.

Brunner. See also Krafft. Brunton, T. L., physiological action of brucine and bromostrychnine, TRANS., 143.

Buch, K., conversion of phenols into amines, 147.

Buchka, K., action of sulphur chloride on ethyl sodacetoacetate, 1200.

Buchka, K., and A. Erck, brazilin, 907.

Buchmann. See Maas.

Buchner, E., influence of oxygen on fermentation, 1002.

Buchner, E., and T. Curtius, action of ethyl diazoacetate on aromatic hydrocarbons, 1207.

synthesis of ketonic acids from aldehydes and ethyl diazoacetate,

Buchner, G., detection of sugar in urine, 843.

Bücheler. See Hüfner.

Buisine, A., constituents of wool grease,

Bulow. See Fischer.

Bunge, G., assimilation of iron, 574.

- inorganic constituents of muscle,

Bungener, H., degeneration of brewers' yeast, 417.

Bunsen, R. W., capillary gas absorption, 867.

Burch, G. J., experiments on flame,

Bury, and O. Provious, new process of extraction of beet, 464.

Busz, C., barytes from Mithlagger,

Butlerow, A., and B. Rizza, asarone, 669.

#### C.

Cabell, J. M., action of hydrogen sulphide on metallic silver, 124.

- crystalline phosphorous anhydride, 121.

- infusorial earth from Richmond, Virginia, 228.

Cailletet, L., liquefaction of oxygen,

Cailletet and Bouty, electrical conductivity of solid mercury and other metals, 855.

Calm, A., a reaction of aldehydes, 387.

Calm. See also Philip.

Calmels, G., action of primary alcoholic iodides on silver fulminate, 133.

Calmels, G., and E. Gossin, constitution of cocaine, 912.

Camerer, W., estimation of nitrogen in the urine and fæces, 303.

 metabolism of five children, 409. Campani, G., existence of manganese in plants, 832.

Canzoneri, F., and V. Oliveri, monobromo- and dibromo-pyromucie acid, 244, 1125.

- Canzoneri, F., and V. Oliveri, reciprocal transformation of the pyrolline, furfuryl, and thiophene groupings, 1144.
- Canzoneri, F., and G. Spica, action of amides on ethyl acetoacetate, 751.
- --- ethyl acetyl- $\beta$ -imidobutyrate, 750.
- reactions of acetone with amides of the acetic series, 746.
- ----- reduction of triacetonamine,
- Carboni, G., formation of starch in vine leaves, 683.
- Carey, E., and F. Hurter, preparation of ammonia from ammonium sulphate, 1268.
- Carhart, H. S., electromotive force of a Daniell's cell, 321.
- Carles, P., estimation of tannin, 302.
- titration of potassium iodide, 1011.
- Carnelley, T., the periodic law, 344.
- -- the periodic law and the occurrence of the elements in nature, 13.
- Carnelley, T., and J. Schlerschmann, influence of strain on chemical action, Proc., 89.
- Carnelley, T., and A. Thomson, bromo-derivatives of diphenyl, tolylbenzene, and ditolyl, Trans., 586.
- Carnot, A., the composition of coal in relation to the plants from which it is derived, 639.
- Carnot, A., and P. M. Proromant, estimation of cadmium, 1094.
- Carpenter, H. S., and W. O. Nicholson, estimation of hydrogen peroxide, 430.
- examination of water for organisms, 442.
- Carter, O. C. S., delicate test for antimony, 1013.
- Casali, detection of chloral, 695.
- Casamajor, P., silver iodide as a blowpipe reagent, 1157.
- the  $\frac{4}{5}$  method of sugar analysis, 693.
- Casthelaz, C., commercial phenols,
- Cathrein, A., microscopic association of magnetite with titanite and rutile, 27.
- Cavazzi, A., action of hydrogen phosphide on bismuth trichloride, 218.
- action of phosphine on auric chloride, 875.
- bismuth antimoniate, 875.
- dissolution of aluminium in alkaline hydroxides, 1112.

- Cavazzi, A., new compounds of bismuth, 653.
- Cazeneuve, P., an isomeric chlorobromocamphor, 806.
- --- bromonitrocamphor, 270.
- monochlorobromocamphor, 668.
- plaster filters to sterilise liquids, 288. preparation of nitrous oxide, 613.
- —— trichlorocamphor, 58.
- Cazeneuve, P., and G. Linossier, action of pyrogallol on copper and iron salts, 1059.
- Cazeneuve, P., and J. Morel, crystallographic properties of camphor derivatives, 1141.
- Cech, C. O., manufacture of santonin in Turkestan, 108.
- Cervello, V., Adonis cupaniana, 833.—physiological action of trimethylhydroxyethyland trimethylvinylammonium hydroxide, 925.
- Cesaro, G., koninckite, 878.
- Chairy, action of various compounds on bacteria of the genus *Tyrothrix*, 289.
- Chancel, G., characteristic reaction of secondary alcohols, 646.
- --- isomeric ketones, 505.
- Chancel, G., and F. Parmentier, chloroform hydrate, 363.
- phide and chloroform in water, 630.
- sulphide and its solubility in water, 137.
- Chandelon, T., detection of strychnine and other alkaloïds, 605.
- organism, 280. Chappell, L. N., variety of chloropal from Albemarle, Virginia, 228.
- Chappuis. See Vincent.
- Charpentier, J., battery with a circulating liquid, 714.
- Charpentier. See also Clamond.
- Charpentier, P., valuation of manganese peroxide, 1162.
- Chasanowitz, L., and C. Hell, action of bromine on eugenol, 779.
- Chastaing, action of chlorine and iodine on pilocarpine, 1081.
- alkyl derivatives of piloearpine, 1250.
- Chatard, T. M., estimation of alkalis in silicates, 296.
- Chautard. See De Clermont.
- Chauveau, A., preventive inegulation for splenic fever, 1084.
- Chechoukoff, M., separation of butylenes, 495.

- Chechoukoff, M., action of chlorine on butylenes, 645. Chechoukoff. See also Lwoff. Cheesman, L. M., measurement of
- rapidly alternating electric currents, 471.
- Chemin, C. O., process for bleaching ozokerite, 101.
- Chervet, A., constants of capillarity of saline solutions, 1105.
- Chichkoff, composition of albuminoïds, 405.
- Chittenden, R. H., and G. W. Cummins, influence of bile, bile salts, and bile acids on amylolytic and proteolytic action, 999.

- relative digestibility of fish in gastric juice, 569.

- Chittenden, R. H., and H. E. Smith, palmitic acid and the palmitins,
- Chittenden. See also Kühne.
- Chlopinsky, detection of pierotoxinin in animal liquids and tissues,
- Christensen, O. T., chromium and manganese compounds analogous to ferro- and ferri-cyanides, 737.
- Chuard. See Brunner.
- Ciamician, G. L., and M. Dennstedt, action of hydroxylamine on pyrroline,
- action of organic anhydrides on pyrroline, 378.
- Ciamician, G., and P. Magnaghi, action of carbonyl chloride on potassium pyrroline, 809.
- action of heat on acetylpyrroline and carbonylpyrroline, 1143.
- action of nascent hydrogen on methylpyrroline, 809.
- - bases derived from pyrroline, 1242.
- Ciamician, G., and P. Silber, acetylpyrroline, 808.
- action of halogens on pyrroline, 1077.
- action of nitric acid on pyrryl methyl ketone, 810, 992.
- monobromopyridine, 811. pyrroline-a-carboxylic acid,
- 246.
- phinic acid, 810. pyrrylene dimethyl ketone,
- 993. Cieslar, A., influence of light on the
- germination of seeds, 419. Cimbal, O., and others, cultivation of potatoes, 587.
- Ckiandi-Bey, antiseptic properties of carbon bisulphide, 97.

- Claassen, E., bitter principle of the cowberry, 1254.
- Clamond and J. Charpentier, new arrangement of the thermoelectric pile,
- Clark, J. W., purification of mercury by distillation in a vacuum, 350.
- Clarke, F. W., and T. M. Chatard, mineralogical notes, 491.
- Classen, A., electrolytic estimations, 190, 597, 1094.
- Classen, A., and R. Ludwig, quantitative analysis by electrolysis, 932. Claudon, E., employment of condensa-
- tion in fractionating apparatus, 331.
- Claus, A., alkyl quinoline-derivatives,
- an allotropic modification of amarine, 1063.
- quinoline, 908.
- Claus, A., and T. Cramer, nitroand amido-derivatives of quinoline, 908.
- Claus, A., and K. Elbs, alkylated diphenylketones, 1065.
- Claus, A., and E. Hüttelin, papaverine, 996.
- Claus, A., and H. Kautz, chloro-derivatives of ortho-xylene, 972.
- Claus, A., and H. Kohlstock, amarine, 1132.
- Claus, A., and F. Mann, orthoethyltoluene, 888.
- Claus, A., and T. Muchall, quinolinecarboxvlic acid, 560.
- Claus, A., and C. Ritzfeld, narceine, Claus, A., and P. Stegelitz, a-di-
- quinoline from azobenzene, 173. Claus, A., and L. Tonn, cumenesul-
- phonic acids, 903. Claus, A., and C. Witt, dinitro- and
- diamido-amarine, 1062. Claus, A., and R. Wollner, methyl
- paraxylyl ketone, 1136.
- Claus, C. F., manufacture of strontium hydroxide, 937.
- recovery of sulphur from hydrogen sulphide, 304. Cleminshaw, E., lecture experiments
- on spectrum analysis, 1035. Cléve, P. T., action of hydrogen
- peroxide on the rare earths, 635. - didymium-compounds, 1039.
- samarium-compounds, 636.
- Cloëz, C., apparatus for preparing hydrogen, 631.
- Cohen, E., labradorite rock of the coasts of Labrador, 644.
- Cohen. See Pechmann.
- Colin, value of disinfectants in chickencholera, 180.

Collie, J. N., action of ammonia on ethyl acetoacetate, 373.

Collin, C., and L. Benoist, reducing vat for indigo, 1096.

Colson, A., action of phosphoric chloride on ethers of the benzene group, 252.

heats of formation of phthalates, 1104.

- saponification of haloïd ethers of the benzene series by neutral substances, 146.

xylenes, 654.

Combemale. See Mairet. Comstock, W. J., and W. Königs, cinchona alkaloïds, 910, 1248.

Coninck, O. de, brucine, 564.

decomposition of pyridine methiodides and ethiodides by the action of alkalis, 272.

- homonicotic acid, 671.

 α-picoline, γ-lutidine, and pyridine, 671.

 pyridine-derivatives from brucine, 273.

reactions of alkaloids, 818.

Coninck, de. See also Bochefontaine.

Conrad, E. C. See Griffiths.

Conrad, M., and M. Guthzeit, decomposition of sugar when heated with dilute acids, 745.

halogen-derivatives of ethyl

levulinate, 42.

Cook, E. H., detection and estimation of iodine, Trans., 471.

Coppola, F., ptomaines, 278, 913.

Corenwinder, B., growth of sugar beet, 685.

Cornu, A., spontaneously reversible lines in spectra, 853.

Costobadie, H. A., goods printed with

artificial indigo, 1023. Cotton, S., action of metals on

chloral hydrate, 371. action of oxidising agents

chloral hydrate, 1048. Councler, C., and others, tannin-yield-

ing substances and their applications, 946.

Cownley. See Paul.

Crafts. See Friedel.

Cramer. See Claus. Cripps, R. A., and T. S. Dymond, detection of aloes in mixtures, 1015.

Crookes, W., mutual extinction of the spectra of yttrium and samarium, 1025.

Crova, A., a diffusion photometer, 320. Crova and Garbe, charge and discharge of secondary batteries, 1099.

Cuboni, G., formation of starch in vine leaves, 1004.

Cuisiner, L., manufacture of maltose by Dubrunfaut's method, 205.

Cummins. See Chittenden.

phenylcoumarinsul-Curatolo, T., phonic acids, 539.

Curie. See Friedel.

Curtius, T., diazoacetic acid; diazoacetamide pseudodiazoacetamide, 883. formation of ethyl azinsuccinnate

from ethyl diazoacetate. 886.

Curtius, T., and F. Koch, derivatives of diazosuccinic acid, 885.

Curtius. See also Buchner.

Czeczetka, G., nitrogen determinations by Kieldahl's method, 688.

#### D.

Dabney, C. W., and B. Van Herff, determination of nitrogen by the copper oxide method, &c., 593, 930.

Daccomo, G., trichlorophenol, trichloronitro- and amido-phenols, tribromonitro- and amido-phenols, 889.

Daccomo. See also Guareschi.

Dagiel, A., the albuminoïds of milk, 1149.

Daix and Possoz, extraction of sugar from molasses, 943.

Dalmon, J., arbutin, 1096.

Damköhler. See Otto.

Damoiseau, A., preparation of sodium sulphide, 349.

Damour A., new alumina lime phosphate, 640.

- new mineral from the environs of Nantes, 643.

Damour and Des Cloizeaux, magnesia epidote, 31.

Damski. See Goldstein.

Dana, J. D., sand and kaolin from quartzite, 360.

Danguy, R., nitrogen in leather waste,

d'Ar son val, A., suppression of nitrogen fumes from the Bunsen battery, 854.

Davies, R. H., three Chinese fixed oils, 1022.

Debray, H., purple of Cassius, 875.

Debray and Joannis, decomposition of cupric oxide by heat, 21.

- oxidation of copper, 22.

Decastro. See Mebus.

Dechan, M., galleïn as an indicator, 1012.

Dechan, M., and T. Maben, milk analysis, 446.

Dechant, J., refractive indices of condensed gases, 621.

- Dechen, v., silver amalgam from Oberlahnstein, 219.
- De Clermont, P., and P. Chautard, iodacetone, 648.
- De Forcrand, glyoxal-ammonium hydrogen sulphite, 627, 648.
- heat of formation of ammonium sulphite, 471.
- heat of formation of alkaline alcoholates, 1102.
- sodium methoxide, 1031.
- De Gasparin, complementary manures,
- phosphatic deposits in the southeast of France, 127.
- De Gasparin, P., phosphoric acid in the soil, 588.
- Degener, P., and J. Lach, treatment of animal charcoal, 1170.
- De Girard, J., action of phosphonium iodide on ethylene oxide, 1121.
- Dehérain, P. P., butyric fermentation in the diffusion vessels of sugar factories, 464.
- cultivation of sugar-beet, 184.
- --- cultivation of sugar-beet at Grignon in 1884, 423.
- experimental culture of wheat at Grignon, in 1884, 928.
- on rotations, 185.
- Dehérain, P. P., and L. Maquenne, evolution of carbonic anhydride and absorption of oxygen by leaves in the dark, 927.
- Deichmüller, A., F. Szymanski, and B. Tollens, \(\beta\)-hydroxybutyric acid in diabetic urine, 830.
- Delacharlonny, P. M., hydrated aluminium sulphate, 134.
- De la Rue, W., and H. W. Müller, electric discharge with the chloride of silver battery, 322.
- Delory, dyeing with alizarin colours on indigo-blue cloth, 106.
- Demarcay, E., methods of spectrum analysis, 465.
- separation of titanium from niobium and zirconium, 639.
- Denaro. See Oliveri. Dennstedt. See Ciamician.
- De Pitteurs, molecular modifications
- of silver bromide, 349.

  Derby, O. A., occurrence of gold in Brazil, 356.
- the Santa Catharina meteorite, 362. Des Cloizeaux, crystalline form and optical characters of sismondine, 1118. - eudnophite, 641.
- Des Cloizeaux. See also Damour. Deslandres, H., relation between the ultra-violet spectrum of water and the telluric bands, A, B, a, 713.

- Despeissis, L. H., treatment of syrups by electricity, 205.
- Detmer, W., formation of hydrochloric acid in plants, 683.
- De Vries, H., decomposition of organic acids under the influence of light,
- estimation of the combined acids
- in plant sap, 1014. De Vrij, J. E., assay of commercial quinine sulphate, 302.
- Dewalque, G-., hatchettine from Seraing, 220.
- Dewar, J., critical volumes of liquids,
- Dewar. See also Lieving.
- Dézaunay. See Andouard.
- Dicocco. See Sestini.
- Didier, P., sulphides of cerium and lanthanum, 955.
- Diehl, L., and A. Einhorn, condensation-products of cinnamaldehyde with acetone, 1221.
- condensation-products of orthonitrocinnamaldehyde with acetone, 1222.
- preparation of ortho- and para-nitrocinnamaldehyde, 1221.
- Dieterle, W., and C. Hell, adipic acid, 43.
- Dietrich, E., manufacture of asphalte,
- Dietzell, E., source of the nitrogen of the Leguminosæ, 418.
- Dieulafait, composition of the ash of the Equisetaceæ, 583.
- concentration of zinc carbonate in dolomites, 640.
- non-volcanic origin of boric acid, 876.
- origin of boric acid, 876.
- origin of iron, manganese, and zinc minerals in the older secondary limestones, 644.
- origin of manganese minerals, 1119. origin of the phosphorites in the south-west of France, 30.
- origin and formation of masses of calcium phosphate in sedimentary rocks, 127.
- Diller, J. S., fulgurite from Mount Thielson, Oregon, 493.
- Ditte, A., fluor-apatites, 126, 225.
- Divers, E., constitution of the fulminates, TRANS., 77.
- constitution of non-saturated oxygenous salts: reaction of phosphorus oxychloride with sulphites and nitrites, TRANS., 205. Divers, E., and T. Haga, behaviour of
- stannous chloride towards nitric oxide and nitric acid, TRANS., 623.

Divers, E., and T. Haga, conversion of Pelouze's nitrosulphates into hypopitrites and sulphites, TRANS., 203.

- - existence of barium and lead nitrosulphates, Trans., 364.

formation of hyponitrites from nitric oxide, Trans., 361.

- - reactions between mercurous nitrate and nitric oxide or nitrites,

Proc., 95. Divers, E., and M. Kawakita, decomposition of silver fulminate by

hydrochloric acid, Trans., 69. Divers, E., and T. Nakamura, new hydrocarbon from Japanese petroleum, Trans., 924.

E., and T. Shimidzu. Divers, action of pyrosulphuric acid on certain metals, Trans., 637.

- action of sulphuric and nitric acids on zine, in the production of hydroxylamine, TRANS., 597.

- constitution and reaction of

liquid nitric peroxide, TRANS., 636.

— reactions of selenious acid with hydrogen sulphide and of acid with hydrogen sulphurous selenide, TRANS., 441.

- use of sulphuric acid to oxidise metallic sulphide in analysis, 836. Divers, E., and M. Schimosé, quan-

titative separation of tellurium from selenium, Trans., 439. Dixon, H. B., conditions of chemical

change in gases, 479. Dixon, H. B., and H. F. Lowe, decomposition of carbonic anhydride by the electric spark, TRANS., 571.

Dobbie, J. J., variety of saponite, 229. Dobbie, J. J., and G. G. Henderson, red resin from Dracæna cinnabari, 808.

Dobbie, J. J., and J. B. Hutcheson, easy method of determining the specific gravity of solids, 332.

Dobbie. See also Gray. Dobbin, L., and O. Masson, action of the halogens on saits of trimethyl

sulphine, TRANS., 56.
Doebner, O., and W. w. Miller, methylquinolines, 1079.

Dölter, C., augites, 735.

- effect of heat on vesuvian, apatite, and tourmaline, 26.

relation between the optical properties and chemical composition of pyroxene, 229. Döll, E., pseudomorphs, 221.

Döring, A., and others, vanadates from the Argentine Republic, 641.

Dott, D. B., estimation of spirit of nitrous ether, 1013.

Dougherty, G. T., estimation of antimony, 297.

Dragendorff and Spohn, alkaloids of Aconitum lycoctonum, 403.

Dralle. See Schall. Draper, H., use of carbon bisulphide in prisms, 853. Draper, H. N., lakmoïd and carminic

acids as reagents for alkalis, 931.

- preparation of hydrogen sulphide, 346.

Drechsler, G., manuring experiments,

— notes on manuring, 187.

Dreser, H., histological chemistry and physiology of the kidney, 923. Dreyfus, E., constitution of bleaching-

powder, 19.

Dubernard, volumetric estimation of

potassium, 1261. Dubois, C., and L. Padé, natural

fats, 844. Duclaux, E., germination in soil rich in organic matter, but free from

microbes, 428. · vitality of germs of microbes, 417. Dudgeon, P., occurrence of linarite in

slag, 226. Dürkopf, C., reduction and oxidation

products of aldehydecollidine, 817. Duggan, J. R., relation of antiseptic power to chemical constitution, 1016.

Duisberg, C., formation of paratolylparamethylimesatin from dichloracetic acid and paratoluidine, 543. Dujardin. See Bechamp.

gravitation and atomic Dulk, L.,

weight, 722.

Dunschmann, M., and H. v. Pechmann, substitution products of acetonedicarboxylic acid, 1201.

Dunstan, W. R., and F. Ransom, detection of alkaloids in the roots of Atropa belladonna, 448.

Dunstan, W. R., and F. W. Short, glucoside from Strychnos nux-vomica, 395.

- Strychnos nux-vomica, indigenous to Ceylon, 583.

Dupré, A., battery with two liquids, 853. Durin, recovery of paraffin and heavy oils from petroleum residues, 463.

Duvillier, E., creatines and creatinines, 819.

α-ethylamidopropionic acid, 373.

— diethylamido-α-butyric acid, 750. Du villier, E., and H. Malbot, tetramethylammonium nitrate, 370.

Dyer, B., manuring turnips, 589.

Dymond, T. S., estimation of ethyl nitrite in spirit of nitrous ether, 842. Dymond. See also Cripps.

#### E.

- Eastman, J. R., new meteorite, 494.
- Ebert, G., action of hydrobromic acid and bromine on coumarin, coumarone, and orthocoumaric acid, 391.
- Ebert, H., constitution of ethyl succinosuccinate, 1122.
- Ebner, V. v., difference between crystalline and anisotropic structures, 631.
- Eckenroth, H., mixed observations, 786.
- Eder, J. M., behaviour of the haloïd compounds of silver to the solar spectrum, 703.
- ---- chemical action of light, 1173.
- spectrographic investigation of different standards of light, 1026.
- Edler, E., 1:3:4:5 nitropseudocumene, pseudocumidine, and pseudocumenol, 771.
- Effront, J., two isomeric isobutylorthamidotoluenes, 151.
- Eggeling and Pasteur, various cattle diseases, 73.
- Egger, E., action of dilute acids on bottle-glass, 459.
- —— testing wine for added water, 842. Egli, K., dry distillation of ammonium benzenesulphonate, 799.
- ---- isomeric thiotolens, 766.
- Ehrenberg, A., analysis of gases by combustion, 1261.
- ---- chloro-- and bromo-fulminuric acids, 1192.
- —— fulminuric acid, 1192.
- ---- mercury fulminate, 38.
- --- sodium fulminate, 1191.
- Ehrenstein, S. v., lime in the separation of beet juice, 1170.
- Ehrhardt, O., specific heat and latent heat of fusion, 625.
- Eichbaum, F., curd soaps, 944.
- preparation of cheap toilet soaps,
- Eijkmann, J. F., active constituents of Nandina domestica, 565.
- active constituents of Skimmia japonica, 553.
- the alkaloïd of Macleya cordata, 404. the poisonous constituents of Sko-
- polia japonica, 404. Eiloart, A., bromine as a test for quinine, narcotine, and morphine, 96.
- Einhorn. See Diehl. Ekstrand, A. E., mononitro-α-naphthoic acids, 548.
- mononitro-β-naphthoic acids, 904.
   a sulphoxide of naphthalene, 170.
- Elbers, A., compounds of benzalde-

- hyde with aniline hydrochloride and stannic chloride, 528.
- Elbers, A., compounds of hydrazines with ketonic and aldehydic acids, 534. Elborne, W., English rhubarb, 582.
- Elbs, K., and O. Wittich, action of chloropicrin and chloroform on toluene, 517.
- Elbs, K., and E. Larsen, paraxylylphenylketone, 261.
- Elbs. See also Claus.
- Eliassor, W., fate of morphine in the organism, 577.
- Ellenberger and Hofmeister, researches on the digestion of the horse, 178, 679, 1148.
- 74. effects of lead on ruminants,
- Elliot, A. H., anthracene from watergas tar, 549.
- Elster, J., and H. Geitel, the simplest form of induction machine, 1098.
- Emich, F., behaviour of the bile acids with gelatin and gelatin peptones, 822.
- natural purification of waters, 846. Emmerling, A., formation of albumin
- in green plants, 289. Emmerling and others, manurial
- value of freshly fallen leaves, 686. Endemann, H., examination of gly-
- cerol, 443.
  —— formation of grape-sugar from starch, 104.
- Engel, R., combination of magnesium and hydrogen potassium carbonates,
- magnesium hydrocarbonate, 724.
- solubility of magnesium carbonate in carbonic acid, 484.
- Engel, R., and J. Ville, estimation of hydroxides in presence of carbonates, 931.
- Engel, W., new cumidine, 1215.
- Engler, C., direct nitration of acetophenone, 1223.
- presence of pseudocumene and mesitylene in different mineral oils, 1209.
- Engler, C., and Hassenkamp, derivatives of dibromacetophenone, 1223.
- Engler, C., and P. Riehm, action of acetone on aniline, 1246.
- Epstein, W., synthetical lutidine, 815. Erck. See Buchka.
- Erckmann, G., dissociation tension of ammonium carbamate, 859.
- Erdmann, H., action of sulphuric acid on the phenylcrotonic acids, 528.
- --- conversion of lactonic acids into lactones, 963.

Erdmann, H., nitration in the sidechains in aromatic compounds, 662.

Erdmann. See also Fittig and Volhard.

Erhart, F., glycide pyroacemate, 1207. Erlenmeyer, E., formation of pyrotartaric acid, 753.

Errera, G., ethylphenol, 775.

- action of chlorine on cymene, 655. -  $\alpha$ -phenylpropylene and  $\alpha$ -paratolylpropylene, 772.

Errera, L., glycogen in beer yeast,

glycogen in ferments, 1254.

Escales, R., action of phenylhydrazine on sulphinic acids, 798.

Eschellmann. See Muspratt.

Eser, C., influence of physical and chemical properties of the soil on evaporation, 80.

Essner, J. C., action of hydrogen on acetamide, 245.

Essner, J. C., and E. Gossin, acetyltoluene, 252.

- action of amyl chlorides and amylene on toluene, 517.

- - action of benzoic chloride on isodurene in presence of AlCl<sub>3</sub>, 253.

Étard, A., and G. Bémont, alkaline ferrocvanides and their compounds with ammonium chloride, 364.

- - green ferrocyanides or glaucoferrocyanides, 496.

- - hydroferrocyanic acid and its derivatives, 233.

Etti, C., kinoin in Malabar kino, 59.

Eugling, W., casein in milk, and on the action of rennet, 1083.

 composition of Alpine and meadow hay, 929.

effect of rain on the quality of hay, 1154.

 experiments with nitrogenous and peaty soils, 929.

- melted butter, 1171.

Ewing, A. L., erosion of limestone, 358. Exner, F., new method for determining the size of molecules, 951.

Eyster, G. S., qualitative determination of the bases without hydrogen sulphide, 1012.

## F.

Falck, E., action of ethyl chlorocarbonate, &c., on benzenylamidoxime, 1216.

Falières, E., titration of potassium iodide, 1011.

Farsky, F., fine and coarse grained superphosphates, 82.

Farsky, F., sulphuric acid as manure, 83. Fauconnier, A., reduction of mannitol, 743.

Favorsky, A., condensation of crotonylenes, 645.

 isomerism of acetylene hydrocarbons, 736.

Feer, A., and W. Königs, derivatives of carbostyril, 1235.

- — derivatives of methylhydroquinoline, 1245.

Fehrenbach. See Nobel.

Feldmann, A., preparation of ammonia, 1017.

Fellows. See Griffiths.

Fényes, D., barytes from Pésey, 733.

Ferrari, C., influence of the weather

on crops, 80. Ferrari, P., detection of sulphuric acid in wine, 692.

Festing. See Abney.

Fielinsky, N., additive products of methylamine and  $\beta$ -methylglycidic acid, 752.

Fileti, M., cumyl ether, 776. Fischer, B., and O. Philipp, dimethylamidoazobenzene as indicator in alkalimetry, 1159.

Fischer, B., and B. Proskauer, disinfection with chlorine and bromine,

Fischer, E., chemical examination of nocerine, 957.

- compound of glucoses and sucroses with phenylhydrazine, 53.

 constitution of the hydrazines, 257.

 naphthalene as an insecticide, 454. Fischer, E., and C. Bulow, benzoylacetone, 1237.

Fischer, E., and J. Tafel, hydrazines of cinnamic acid, 540.

Fischer, F., electrolytic production of metals and chlorine, 941.

Fischer, O. W., diquinolines, 399, 1246. two tin organic compounds, 377.

Fischer, O., and G. Körner, chrysaniline, 260.

Fischer, O., and E. Täuber, flavaniline, 400.

 harmine and harmaline, 820. Fischer. See also Skraup.

Fittbogen, action of various forms of phosphoric acid, 1009.

Fittbogen, J., and O. Foerster, ensilage of frozen potatoes, 184.

Fittbogen, J., and others, influence of calcium sulphide on barley, 1154.

Fittig, R., condensation-product of the lactones, 375.

- constitution of vinaconic acid, 653.

— Perkin's reaction, 663.

Fittig, R., and H. Erdmann, synthesis of  $\alpha$ -naphthol, 545.

Fittig, R., and M. Rühlmann, action of water and hydriodic acid on valerolactone and isocaprolactone, 375.

Fleck, H., oxidation of ammonia in spring water, 704.

· recognition of nitric acid stains on textures, 595.

Fleischer, M., hop culture in peat soils, 185.

Fleischer, M., and others, action of sea-sand on peaty and sandy soils, 929. Fleischl, E. v., double refraction of

liquids, 318.

Fleischmann, W., notes on milk, 849.

C. Thiel's pasteurising apparatus for milk, 105.

Fleischmann, W., and J. Berendes, creaming of milk, 944.

Fleissner. See Lippmann. Fleury, G., density of porous bodies,

- Grevillea gum, 238.

Flöel, O., action of potassium and sodium salts on unstriated muscle,

Flückiger, F. A., estimation of morphine in opium, 1165.

- testing oil of roses, 934.

Flückiger, M., the copper oxide reducing constituent of normal urine;

Fock, A., new thermo-regulator, 950. Föhr, C. F., estimation of minute quantities of silver, 84.

Foerster. See Fittbogen. Fokker, A. P., hygienic importance of the detection of carbonic oxide, 415.

Foote, H. C., apparatus used for precipitating copper by electrolysis, 597. Foote, twin crystals of zircon, 222.

Fossek, W., hydroxyphosphinic acids, 504.

Foullon, H. v., crystallised copper from Schneeberg, 220.

native tellurium from Faczebaja, 1116.

- products of the alteration of pitchblende, 222.

Fouqué, triclinic felspar from Quatre Ribeiras, 642.

Fourmont, new method of testing for chlorates, 430.

Fourneaux, E., nitroparatoluquinoline, 400.

Foussereau, G., electrical resistance of alcohol, 1100.

Fox, W., and J. A. Wanklyn, butter analysis, 446

Fraenckel, N., derivatives of thiodiphenylamine, I130.

Franchimont, A. P. N., action of nitric acid on certain bibasic acids,

action of nitric acid on methylsulphonamides, 969.

reduction of nitrodimethylamine,

Francis, E. E. H., toughened filter paper, Trans., 183.

Frank, A. B., formation and physiological significance of gum, 684.

Frankland, E., chemical changes in relation to micro-organisms, TRANS., 159.

Frankland, P., illuminating power of hydrocarbons, Trans., 235.

Franzenau, A., amphibole from the Aaranyer Mountain, 226.

 anglesite from Felsö-Vissó, 733. Frear, W., the time element in gluten

determinations, 1014.

Freda, G., chrysocolla from Etna,

Frédéricq, L., influence of changes in the composition of the air on respiratory changes, 407.

Fremery, J. L. de, analysis of two Californian wines, 842.

Fremy, E., and Urbain, cutose, 369.

Frenzel, J., and T. Weyl, determina-

tion of case in in cow's milk, 936.

Fresenius, R. and W., Portland cement and its adulteration, 616.

Fridolin, chebulinic acid, 396.

Fridolin, A., tannin from various plants, 808.

Friedel, reply to remarks by Troost concerning chloral hydrate, 746.

Friedel, C., and J. M. Crafts, decomposing action of aluminium chloride on hydrocarbons, 654.

 decomposition of sulphonic acids, 268.

Friedel, C., and J. Curie, pyroelec-

tricity of the topaz, 469. Friedel, C., and L. Roux, action of aluminium on aluminium chloride,

Friedländer, P., nitration of cinnamic

acid derivatives, 1137. Friedländer, P., and M. Lazarus, nitration of meta- and ortho-nitrocin-

namic acids, &c., 1138. Friedländer, P., and J. Mähly, nitration of paranitrocinnamic acid,

Friedländer, P., and A. Weinberg,

carbostyril, 989. Friswell, R. J., toughened glass beakers, Proc., 86.

Friswell, R. J., and A. G. Green,

relation of diazobenzeneanilide to amidoazobenzene, TRANS., 917.

Fritz, H., mutual relations of the physical properties of the elements, 117.

Fröhlich, E., derivatives of benzoylpseudocumidine, 154.

Fröhlich, G., measurement of solar heat, 326.

A., Fromentin,  $\mathbf{and}$ Manoury, recovery of beet-juice by lime, &c., 709.

Fromme, C., the tempering of steel, 26. Frost, B., constitution of terebic and tetraconic acids, 393.

Furry, F. E., iodic acid as an indicator, 592.

#### G.

Gabriel, S., action of phthalic anhydride on benzyl cyanide, 902.

- action of sulphuric acid on acetophenoneorthocarboxylic acid, 166.

- benzylidinephthalide, 902, 1228. constitution of phthalylacetic acid, 164.

- methylenephthalide, 1228.

Gacon, A., blasting powder, 315.

effects of fresh stable Gagnaire, manure on potatoes, 189.

Gaiffe, A., a standard volt, 1099.

Galloway, W., influence of coal-dust on colliery explosions, 463.

Gans, J., purification of molasses, 103. Gantter, F., and C. Hell, occurrence of pimelic acid amongst the oxidationproducts of castor oil, 44.

Garbe. See Crova.

Garnier. See Schlagdenhauffen. Garrod, A. B., physiology of uric acid,

Gasiorowski, K., and V. Merz, nitriles from aromatic formamides,

Gasiorowski, K., and A. F. Wäyss, chlorinated and brominated hydrocarbons from aromatic amines, 1060. diazo-compounds, 525.

Gastiger, ethyl paratolylnitrosamine,

Gattermann, L., derivatives of metanitroparatoluidine, 975.

tolane tetrachloride, 167.

Gauthier, H., paramonochloracetophenone, 1061.

Gautier, A., constitution of the albuminoïds, 1082.

leucomaïnes, 676.

- new method for the synthesis of nitrogenous organic compounds, 275.

Gautier, A., sterilisation of fermentable liquids in the cold, 287.

Gautier, F., manganese steel, 307.

Gawaloski, A., bottles for reagents,

 modification of Zulkowsky's azotimeter, 593.

new form of burette, 835.

— soap analysis, 844.

Gay, J., absorption of nitric oxide by ferrous salts, 1109. Gebhardt, W., action of ammonia and

amines on thiocarbamide, 387. secondary amines, II, 383.

Geigy, R., and W. Konigs, derivatives of benzophenone, 1236.

Geissler, E., estimation of fat in milk, 1014.

Geitel. See Elster:

Genth, C., excretion of carbamide,

Genth, F. A., herderite, 488.

entil, C.,  $\beta$ -naphthoquinolinesulphonic acid, 561. Gentil,

Gerlach, G. T., specific gravity, boiling point, and vapour-tension of aqueous glycerol, 499.

Gernez, D., nacreous crystals of sulphur, 1037.

rate of transformation of prismatic into octahedral sulphur, 952.

- transformations of sulphur, 1109. Gerrard, A. W., apparatus for estimating carbamide, 610.

- crystalline substance from Jambosa root, 396.

Geuther, A., action of lead hydroxide and silver oxide on aqueous solutions of sodium pentasulphide and thiosulphate, 217.

· derivatives of symmetrical isodichlorethyl ether, 227.

Giacomo, C., detection of sugar in urine, 702.

Gibbs, W., new complex inorganic acids, 875.

Gilbert. See Lawes. Girard, A., alimentary value of the different parts of the wheat grain, 678.

- formation of sugar in beets, 75.

Girard, C., estimation of sugar by Fehling's solution as conducted at the municipal laboratory in Paris, 1163.

Girard, C., and Pabst, absorption spectra of some colouring matters, 1098.

Girard. See also Muntz. Giraud, H., action of ammonia on solutions of potassium salts, 1038.

Gladding, T., quantitative separation of rosin and fats, 603.

- Gladstone, J. H., and A. Tribe, action of the copper-zinc couple on benzyl bromide, TRANS., 448.
- Gläser, M., action of potassium permanganate on sodium thiosulphate, 957.
- Glaser, C., estimation of phosphoric acid, 837.
- estimation of reverted phosphoric acid by the oxalate method, 838.
- Glaser, F. C., manufacture of zinc oxide, 1270.
- Glaser. See also Petermann. Glause, A., and B. Luchsinger, physiological action of some ammonium bases, 415.
- Gockel, A., relation of "Peltier's heat effect" to the available energy of a galvanic current, 856.
- Godefroy, L., hydrates of chromic chloride, 352.
- Godlewski, E., circulation of the sap in plants, 927.
- Göhring, C. F., action of aldehyde on paranitrobenzaldehyde, 527.
- action of aldehyde on metanitrobenzaldehyde, 791.
- Göring, T., preparation of concentrated acetic acid, 105.
- Goesmann, C. A., manurial value of tobacco-stems, 589.
- Goldmann, E., state of cystein and formation of sulphuric acid in the animal body, 922.
- Goldschmidt, H., the so-called oxy-camphor of Kachler and Spitzer, **27**0.
- Goldschmidt, H., and R. Koreff, camphor, 1071.
- Goldschmidt, H., and H. Schmid,
- nitrosophenols, 775, 1238. Goldschmidt, H., and R. Zurrer,
- carvoxime, 1210. --- carvoxime-derivatives, 1058.
- Goldschmiedt, G., papaverine, 1080. Goldstein, M., and A. Damski, rise
- of solutions in capillary tubes, 115.
- Goloubeff, reduction of isodinitrobenzene, 660.
- Gonnard, F., pegmatite containing large crystals of chlorophyllite, 34.
- pegmatite on the borders of Vizézy, near Montbrison, 131.
- mineralogical notes on the environs of Pontgibaud, 220.
- Gooch, F. A., separation of titanium from aluminium and iron, 1265.
- Goodwin, W. L., nature of solution,
- Goppelsroeder, F., bleaching indigoblue and Turkey-red by electrochemical means, 108.

- Goppelsreeder, F., formation of hvdroxy- and chloro-cellulose electrochemically, 208.
- preparation of persulphocyanogen by electrolysis, 107.
- Gorboff, A., and A. Kessler, apparatus for fractional distillation under reduced pressure, 950.
- Gorceix, H., hydrated titanium oxide from Diamantina, 640.
- · minerals from the metamorphic rocks of Ouro Preto, Brazil, 30.
- monazite sands from Caravellas. Province of Bahia, Brazil, 489.
- Gore, G., effect of heat on ammonium and potassium fluochromates, 1114.
- electro-deposition of carbon and silicon, 110.
- of silver fluoride, electrolysis chlorate, and perchlorate, 110.
- estimation of ammonia in potable water, 194.
  - magnesium suboxide, 123.
- --- reactions with carbon and some of
- its compounds, 119.

  reduction of metallic solutions by
- means of gases, 1112.

   relation of chemical corrosion to voltaic current, 324.
- relation of heat to voltaic and thermoelectric action of metals.
- some new phenomena of electrolysis, 324.
- unequal electric conduction resistance at cathodes, 324.
- Gorgeu, A., tricobalt tetroxide, 351. Gorham, J., the pupil photometer,
- Gossin, E., action of sulphuric acid on
- cyanogen iodide, 645.
- Gossin. See Calmers and Essner. Grabowski, ozocerite and ceresine of Gallicia, 487.
- Graebe, C., phthalimidine, 979.
- reduction of phthalimide and phthalide, 165.
- β-sulphophthalic acid, 902.
- Graebe, C., and P. Guye, diphthalyl,
- Graebe, C., and H. Schmalzigaug, diphthalyl, 797.
- Graeff, F., action of reducing agents on nitrotoluidine, 1127.
- Graetzel, preparation of magnesium, 940.
- Grandval, A., and H. Lajoux, detection and estimation of nitric acid in the air, water, soils, &c., 1093.
- Brasset, J., anæsthetic action of cocaïne, 285.

Grasset, J., anæsthetic action of cocaine hydrochloride, 415.

Grasset and Jeannel, physiological action of cocaine, 571.

Gratama, D., double sulphide of aluminium and potassium, 350. Grandeau, H., phosphates, 872.

Gray, T., A. Gray, and J. J. Dobbie, electric qualities of glass, 470.

Green. See Friswell, Morley.

Greene, W. H., action of hydrochloric acid and of chlorine on acetobenzoic anhydride, 55.

 diethoxymethane and preparation of methylene dichloride, 38.

- formation of dibenzyl from ethylene dichloride and benzene in presence of aluminium chloride, 58.

new synthesis of saligenin, 53.

Greenish, T., pipitzahoic acid, 396. Gréhant, N., and J. Peyrou, gas contained in floating and submerged leaves, 1153.

Greinert, ammonia, nitrous acid, and nitric acid in potable waters, 297.

Grevingk, E., nitro- and amido-derivatives of metaxylene, 144.

Griess, P., acid ammonium bases,

action of potassium cyanate on metanitramidobenzoic acid, 54.

- derivatives of cyanocarbimidoamidobenzoic acid, &c., 1225.

--- diazo-compounds, 788.

Griess, P., and G. H. Harrow, presence of choline in hops, Trans.,

Griffiths, A. B., application of iron sulphate in agriculture, Trans., 46.

pancreatic function of the cephalopod liver, 829.

platinum carbides formed at low temperatures, 487.

- uric acid from the green glands of Astacus fluviatilis, 680.

Griffiths, A. B., and E. C. Conrad, salicylic acid in the cultivated pansy,

Griffiths, A. B., and H. Fellows, examination of the organ of Bojanus in anodonta, 921.

Grimaux, E., albuminoïds, and the coagulation of colloïds, 1146.

Gröger, M., oxidation of the fatty acids of tallow, 883.

Groshans, J. A., specific gravity of substances in the solid state and in aqueous solution, 333.

Gross, F., derivatives of phenylhydroxyethenylamidoxime, 1218.

phenylhydroxyethenylamidoxime, 898.

Grothmann. See Lellmann.

Grouven, H., recovery of sulphur from soda waste, 614.

Gruber, O. v., preparation of sulphuric anhydride from nitrosyl sulphates, 199.

Gründler, J., iodine in human urine after the external application of iodoform, 413.

Grüneberg. See Vorster.

Guareschi, J., and G. Daccomo, chloronitro-and bromonitro-quinones,

Gubbe, O., optical rotatory power of invert sugar, 1194.

Gucci, P., action of carbon bisulphide on metaphenylenediamine, 156.

- new method of separating copper from cadmium, 193.

Gürke, O., preparation of gallein,

Guignet, E., chlorophyll and its compounds, 551.

- existence of glycirrhizin in several vegetable families, 395.

Guillemin, G., alloys of copper and cobalt, 1114.

Guinoch et, analysis of the contents of a cyst formed under the tongue, 285.

Gumpert, F., decomposition of benzonitrile by fuming sulphuric acid,

– phenyl cyanate, 656.

Gunning, J. W., examination of potable water, 841.

Guntz, heat of formation of antimony bromide and iodide, 1101.

Gurkens, F., physiological action of nickel salts, 681.

Gustavson, G., reactions of aluminium salts with organic compounds, 363.

thermic data for the compounds of aluminium bromide with hydrocarbons, 472.

Guthrie, F., eutexia, 329.

salt solutions and attached water, 337.

thermal and volume changes attending mixture, 339.

Guthrie, F. B., solubility of salts in fused sodium nitrate, TRANS., 94.

Guthzeit. See Conrad.

Gutzkow, F., Reynolds' process for parting gold from bars, 708.

Guye. See Graebe.

Guyot, M., description of a crystal of euclase, 228.

#### H.

Haas, R., peroxides of the zinc-magnesium group, 20.

Habel, L., a reddish coloration of cyanide solutions, 233.

Habermann, J., acetonequinol, 53.

- basic salts, 351.

— fagine, 676. Haccius, C., kephir, 942.

Häpke, L., meteorite from Durango, 230.

Haga. See Divers.

Hager, nitric peroxide in bismuth subnitrate, 354.

Hager, H., action of ethyl chlorocarbonate on paranitraniline, 149.

- detection of arsenic in presence of antimony, 838.

- new reaction for sodium, ammonium, and lithium salts, 441.

reactions for distinguishing chlorides, bromides, and iodides when mixed together, 1010.

Haitinger, L., remarks on Perkin's note on the action of aniline on methyl dehydracetate, 762.

dehydracetic acid, 761.

Haitinger, L., and A. Lieben, chelidonic acid, 47, 965.

— nitrogenous derivatives of chelidonic acid, 811.

Halberstadt, W., atomic weight of platinum, 355.

Haller, S., pseudocumidine, 522.

- sylvic and pimaric acids, 1241.

trimethylquinizine-derivatives, 818.

Halliburton, W. D., chitin, 991.
—— composition of the cartilage of certain invertebrates, 1251.

— the proteïds of serum, 571. Hamburger, H. J., estimation of urea

by bromine, 450.

Hammarsten, O., determination of sulphur in proteids, 931.

separation of serum-albumin and globulin by means of magnesium sulphate, 611.

- the mucin group, 677.

— the sulphur of casein, 914.

Hanamann, J., composition of horse chesnuts, 928.

keeping of topped and untopped beet, 1009.

Hankel, W., electricity developed in the disengagement of gases, 2.

 thermo- and actino-electricity of rock crystal, 1187.

Hanks, H. G., borax deposits, 957. Hanriot, hydrogen peroxide, 344.

Hansch. See Schmidt.

Hansen, E.C., alcoholic ferments, 1168. Hansen. See also Schrodt.

Hanssen, A., brucine, 63, 276, 565, 819. - relation of brucine to strychnine, 1146.

Hanssen, A., and C. E. Schmitt, methods of butter analysis, 197.

Hantzsch, A., constitution of synthetical pyridine-derivatives, and of isocinchomeronic acid, 1078.

- decomposition products of pyridinederivatives, 397.

Harnack, E., estimation of iodine in urine, 296.

Harrow. See Griess. Hart, E., detection of iodine, bromine, and chlorine, 295.

new forms of laboratory apparatus,

Hart, T., motions of camphor on the surface of water, 951. Hartley, W. N., absorption spectra of

alkaloïds, 1174

- atomic weight of beryllium, 484. - delicacy of spectrum photography, 466.

- relation between the molecular structure of carbon compounds and their spectra, Trans., 685.

use of moist electrodes, 325.

Hartshorn. See Hill, Jackson. Hartz, J. D. A., preparation of daturine from stramonium seeds, 820.

Hasenclever, R., manufacture of phosphate from basic slags, 615.

Haslam, A. R., action of lime on quinine, 1267.

 volatilisation of zinc from German silver alloys, 707.

Hassack, C., behaviour of basic copper carbonate with nascent hydrogen, 1270.

Hassack. See also Arche.

Hasselberg, B., the second spectrum of hydrogen, 317.

Hassenkamp. See Engler. Hatch, F. H., hypersthene andesite from Peru, 1189.

Haug, G., and C. Hoffmann, a substitute for caoutchouc, 712.

Haushofer, microscopic analysis, 689. Hautefeuille, P., and J. Margottet, polymorphism of silicon phosphate, 120.

Hautefeuille, P., and A. Perry, aluminium oxychloride, 874.

- apparent volatilisation of silicon at 440°, 872.

Hay, M., chemistry of nitroglycerol, 742.

physiological action of nitroglycerol, 681.

Hay, M., and O. Masson, composition of nitroglycerol, 742.

Haycraft, J. B., action of a secretion obtained from the medicinal leech,

Hazura. See Benedikt, Weidel.

Heberand. See Zincke.

Heckel, E., and F. Schlagdenhauffen, chaulmoogra seeds, 927.

chemical composition of Artemisia gallicia, 684.

Hehner, O., analysis of honey, 444.

Heiden, E., superphosphatic gypsum as an absorber of ammonia, 83.

Heiner, G., estimation of resin in soap, 933.

Heinrich, dependence of cultivation on the depth of the soil, 80.

Hell, C., and G. Lumpp, normal butylmalonic acid, a new isomeric pimelic acid, 44.

Hell, C., and R. Rempel, derivatives of normal suberic acid, 755.

Hell, C., and A. Ritter, action of the halogen acids on wormseed oil, 172.

Hell, C., and G. Schüle, normal pentylmalonic acid, 757.

Hell. See Chasonowitz, Dieterle, Ganter.

Hellriegel, H., evaporative surfaces of plants, and influence of moisture in soils on plant growth, 421.

— preservation of dried

 $\mathbf{washed}$ sugar-beet mark sections, 685.

Hempel, W., apparatus and arrangements of the laboratory at Dresden,

- behaviour of the different modifications of carbon towards iron, 725.

 derivatives of suberic acid, 756. — estimation of oxygen in air, 592.

- influence of the chemical nature and the pressure of gases on electric induction machines, 1098.

- percentage of oxygen in the air, 1091.

titration of iron ores, 932.

Hempse, W., separation of zinc from metals of the same group, 932.

Henderson. See Dobbie.

Henius, M., benzil-derivatives, 1067.

Henneberg, W., feeding sheep with sugar, 1252.

Henninger. See Wurtz. Hénoque, A., action of potassium nitrite on blood, 682.

Henrichsen. See Ostermayer. Henriques, R., a new method of pre-

paring secondary amidoazo-derivatives, 168.

Henriques, R., and M. Ilinski, preparation of the nitroso-naphthols, 801.

Henry, L., amides of the oxalic series,

· haloïd substitution-derivatives of propionic acid, 372.

physical properties of chloracetates, 1121.

primary haloïd derivatives of ethyl ether, 882.

pyrotartaronitrile  $\mathbf{and}$ nitrile, 646.

solubility and fusibility in the oxalic acid series, 335.

trimethylene iodide, 736.

 volatility of cyano-derivatives containing oxygen, 880.

volatility of chloronitriles, 1044. Hensch, A., influence of cultivation on the moisture of the soil, 588.

Hentschel, W., conversion of ethyl carbanilate into amidobenzoic acid,

- phenyl cyanate, 888.

 preparation of methyl chloroformate, 883.

Heppe, G., adulteration of lemon-oil with oil of turpentine, 1163.

adulteration of petroleum with solar oil, 599.

- testing oil of cassia, 697.

Herff. See Dabney.

Hermann, L., action of trichloracetic acid, 575.

Herre, W., preparation of waterproof and incombustible paper, 315.

Herrmann, P., and B. Tollens, reactions of saccharin, 962.

Hertkorn, J., silicates of the phenols, 1056.

Herzberg, M., cinnamic and bydrocinnamic acid: paranitrobenzaldehyde, 661.

Herzog, M., silvering of glass and mirrors, 1020.

Hesekiel, A., new methylpiperidine:  $\beta$ -picoline hexahydride, 812.

Hess, E., and B. Luchsinger, toxicological contributions, 578.

Hess, O., benzoyl-derivatives of aromatic amines, 783.

Hess, W., and A. Bernthsen, amido-and hydroxy-derivatives of phenylacridine, 800.

Hess. See also Bernthsen.

Hesse, O., alkaloïds from the bark of Remijia purdieana, 64.

dicinchonicine, 675.

 fat or wax from cinchona-bark, 1075.

opionin, 1074.

synthesis of homoquinine, 276.

Hesse, W., estimation of micro-organisms in the air, 611.

Heydrich, C., triphenylamine, 1213.

Hidden, W. E., mineralogical notes,

Hidden, W. E., and J. B. Mackintosh, herderite from Oxford Co., Maine, 359.

Hilgenstock, G., phosphorus in the blast furnace, 616.

Hill, H. B., monobromo- and dibromopyromucic acids, 1125. Hill, H. B., and G. T. Hartshorn,

furfurane-derivatives, 762.

Hill, H. B., and A. W. Palmer, sulphopyromucic acid, 1204.

Hill, H. B., and E. K. Stevens, phenoxymucobromic acid, 531.

Hillebrand, W. F., new minerals from Colorado, zunyite and guitermanite, 878.

Hiller, E., percentage of alkaloïds in lupines, 832.

Hilsebein, E., action of phosphoric chloride on meconic acid, 1202.

Hinsberg, O., quinoxalines, 909.

reagent for aromatic diamines, 934.

Hintze, C., microlite, 732.

Hintze. See Anschütz.

Hiortdahl, T., colemanite, 730.

Hirsch, R., paranitro-orthocresol and toluquinonechlorimide, 892.

Hirschhausen, L. v., detection of berberine, hydrastine, and oxyacanthine,

Hirschsohn, E., Siam benzoin, 620.

Hjelt, E., ethylidinethenyltricarboxylic acid, 243.

Hochstetter, H., melilotic acid and anhydride, 390.

Hock. See Traub.

Hodgkinson, W. R., fluorene, Proc.,

Högbom, double tungstates of rare metals, 25.

Hölz, O., bromamidophenols, 1211.

Hönig, M., action of potassium permanganate on sodium thiosulphate, 1111.

Hötte, B., phenylparamide, 1220.

Hoffmann, O., nitrosonaphthol and its derivatives, 545.

Hoffmann. See also Haug.

Hofmann, A. W., conhydrine-derivatives, 401.

— conine group, 562.

--- conversion of phenyl cyanate into phenyl cyanurate, 774.

- crystallised methyl-violet, 791.

 pentamethylaniline, 1128. phosphorus chloronitride, 15.

– thiocyanuric acid, 1193.

Hofmann. See also Behrmann.

Hofmeister, V., digestion of cellulose by the horse, 916.

Hofmeister. See Ellenberger.

Holdefleiss, electrical researches. 1152.

Hollrung. See Kudelka. Holmes, E. M., Japanese oils, 1023.

Holthof, C., precipitation of man-ganese with bromine, 690.

simple fusion salt, 687.

Holz. Šee Roil.

Holzapfel, J., dari as a source of alcohol, 102.

Homolka, B., condensation-products

of α-ketonic acids, 758. Homolka, B., and F. Stolz, iodopropargylic acid, 1198.

Honigmann, M., producing a coating of ferrosoferric oxide on iron, 1271.

Hood, J. J., estimation of iron by potassium permanganate, 297.

— rate of the chemical absorption of

gases, 341.

Hood, W., nickel ore from Piney
Mountain, Oregon, 1190.

Hoogewerff, S., and W. A. Van Dorp, colouring matters from lepidine, 673.

Hooker. See Bamberger.

Hoppe-Seyler, F., decompositionproducts of the colouring matter of the blood, 826.

— effects of phenylhydrazine on the organisms, 574.

separation of case in from albumin, 845, 1015.

— soaps as constituents of blood plasma and of chyle, 573.

Horbaczewski, J., artificial uric and methyluric acids, 1050.

Hornberger, R., composition Sinapis alba during various stages of growth, 1087.

mineral matter in the seeds of forest trees, 1255.

Horsley, J., tests for butter and butterine, 696.

Houzeau, A., estimation of nitrogen, 1011.

Howard. See Illingworth.

Hüfner, G., crystalline metahæmoglobin from the dog, 276.

Hüfner, G., and M. Bücheler, oxyhæmoglobin of the horse, 277.

Hueppe, F., changes which milk undergoes through the agency of micro-organisms, 416.

Hueppe, F., and W. Eugling, blue milk, 1171.

 preservation of milk, 1170. Hueppe, F., and others, lactic ferment

in milk, 1170.

Hueppe. See also Eugling.

Hüttelin. See Claus.

Hufschmidt, F., separation of arsenic from antimony and tin, 86.

volumetric estimation of nitrogen, 1011.

Humpidge, T. S., atomic weight of beryllium, 1184.

Hunt, B., synthesis of tannin, 1228.

Huntington, A. K., preparation of tungstic acid, 1272.

Hurion, variation in the electric resistance of bismuth when placed in a magnetic field, 469.

Hurter. See Carey. Huskisson, P. L., crystallisation of phosphoric acid, 347.

Hussack, E., distribution of cordierite in rocks, 1190.

Hutcheson. See Dobbie.

#### I.

Igelström, L. J., empholite, 31.

- hyalophane from Jakobsberg, 227. Ihl, A., phenols as reagents for carbo-

hydrates, 694. Iles, M. W., decomposition and analyses of slags, 192.

Ilinski, M., nitrosonaphthol and its derivatives, 169.

Ilinski, M., and G. v. Knorre, sepa-

ration of nickel and cobalt, 840. Ilinski. See also Henriques.

Illingworth, B., and A. Howard, thermal relationship between water and certain salts, 339.

Ilosvay, L., conditions for the forma-

tion of native sulphur, 729. Iloupotsky, action of chlorine on

tetramethylethylene, 645. Immendorf. See Anschütz.

Ince, W. H., phenyltribromomethane, Proc., 131.

Isambert, F., action of sulphur on amorphous phosphorus, 483.

preparation of ammonia, 722.

Istrati, monochlorethylbenzene, 251. I wabuchi, K., Japanese materials for the manufacture of ultramarine, 460.

#### J.

Jablochkoff, P., new form of voltaic battery, 468.

- new pile or auto-accumulator, 854. Jacksch, R. v., acetonuria, 680. Jackson, A. W., colemanite, 358, 876.

Jackson, C. L., reduction of camphor to borneol, 991.

Jackson, C. L., and G. T. Harts-horn, action of chromium hexafluoride on benzoic acid, 1224.

Jackson, C. L., and A. E. Menke, action of phosphorous trichloride on aniline, 254.

substances obtained from turmeric, 271.

Jacobsen, J. C., degeneration of yeast,

Jacobsen, O., bromosubstitution-derivatives of paraxylene, 518.

bromosubstitution-derivatives of orthoxylene, 142.

constitution of the benzene-tetra-

carboxylic acids, 166.
— formation of hydrocarbons by the reversal of Friedel and Craft's reaction, 516.

- monochlorometaxylene, 1052.

Jacquemin, G., estimation of cyanogen in gaseous mixtures, 933.

- preparation of cyanogen, 880. Jacquet, E., use of antimony oxalate

in printing, 1276. Jäderholm, A., study of metahæmo-

globin, 407. Jahn, H., validity of Joule's law for

electrolytes, 1029. work done in the decomposition of electrolytes, 1100.

Jahns, E., eucalyptol, 394. James, F. L., deposition of silver on glass, 616.

James, J. W., action of chlorine on ethyl thiocyanate, 365.

- ethyl acetoacetate, Trans., 1.

preparation of ethylene chlorothiocyanate and  $\beta$ -chlorethy sulphonic acid, Trans., 305.

 taurine-derivatives, Trans., 367. Januasch, P., monobromoparaxylene,

251. percentage of water in clinoclase, 642.

Janovsky, J. V., products of the reduction of nitrazo-compounds, nitrolic acids, 1131.

reduction of nitro-azo-compounds

and azo-nitrolic acids, 789. Janovsky, J. V., and L. Erb, intermediate reduction products of nitro-

azo-compounds, 894. Japp, F. R., and N. H. J. Miller, additive and condensation compounds of diketones with ketones, TRANS.,

Japp, F. R., and M. E. Owens, condensation compounds of benzil with ethyl alcohol, Trans., 90.

Jaworski, W., behaviour of carbonic anhydride, oxygen, and ozone in the human stomach, 280.

Jay, ash determinations, 598.

- detection of coal-tar colours in wines, 298.

dry extract, 602.

- substance employed to colour wines, 309.

- vinicolore, 710.

Jeannel. See Grasset.

Jensen, H. O., formation of nitroprussides without the use of nitric acid, 739.

Jensen, J. L., protection of potatoes

against disease, 1154. Jereméeff, P. W., Russian caledonite and linarite, 1186

Joannis, copper oxides, 872. Joannis. See also Debray.

Jobst, J. v., preparation and utilisation of grape-seed oil, 710.

Jödicke. See Knorr.

Jörgensen, S. M., chromammonium compounds and luteochromium salts, 23.

--- cobalt-ammonium compounds, 874.

--- roseocobalt salts, 726.

Johannson, E., detection of colocynthine, elaterine, and bryonine, 606. Johansson, J. E., behaviour of serum albumin towards acids and neutral

salts, 913. Johnson, G., tests for albumin in

urine, 845. Johnson, G. S., modification of Dumas' method for the estimation of nitrogen, 189.

Johnson, J. G., poisoning by canned goods, 1016.

Joly, A., action of boric acid on some colouring matters, 440.

crystallised hydrate of phosphoric acid, 482.

- preparation of arsenic acid, 871. - saturation of phosphoric acid by

bases, 348.
Jones, E. J., decomposition of α-methylpropyl-β-hydroxybutyric acid

by heat, 376.
Jónsson, B., effects of running water on plants, 419.

Jorissen, A., germination of linseed and sweet almonds, 181.

Joulie, H., estimation of phosphoric acid in commercial products, 931.

Jourdan, F., new synthesis of derivatives of hydroacridine and acridine,

Jowanowitsch, K., decomposition of tartaric acid in the presence of glycerol, 1125.

Jünemann, manufacture of sugar and purification of beet-juice by means of magnesia and alumina, 1021.

Julie, method of hardening plaster,

Julius. See Benedict. Jungck, M., the Siemens-Martin process, 98.

Juslin, W., normal α-hydroxyvaleric acid, 137.

Just, F., method for introducing nitrogenous radicles into ethyl malonate, 513.

#### K.

Kabloukoff, glycide of hexylic glycerol, 647.

Kachler, J., and F. V. Spitzer, camphoronic acid, 59, 807.

· — the so-called campholenic acid, 173.

Kahlbaum, G. W. A., dependence of boiling point and pressure, 1176.

- refractive indices of the three methyl acrylates, 1173.

Kalmann, W., and A. Smolka, esti-mation of manganese in spiegeleisen, ferromanganese, &c., 690.

Kamensky, G., electric conductivity of copper-antimony alloys, 323.

Kamnitzer, I., medicinal properties of the root bark of the pomegranate,

Kannonikoff, J., specific refractive energy, 1.

- refractive power of chemical compounds, 949.

Kantz. See Claus.

Kastanecki. See Bistrzycki.

Kauder, E., action of phosphoric chloride on succinyl compounds and on tartaric acid, 651.

Kawakita. See Divers. Kayser, H., condensation of carbonic anhydride on glass, 214.

Kayser, R., caseïn glue, a substitute for gum arabic, 1024.

- substances contained in saffron,

Keeler, J. E., absorption of radiant heat by carbonic anhydride, 626.

Kees. See Tiemann.

Keiser. See Morse, Remsen.

Kekulé. See Anschütz. Keller, P., cyanmethine, 961.

Kellner, O., and J. Sawano, changes in fodder during ensilage, 1087.

Kemp, W. J., decomposition of soda waste by means of carbonic anhydride, 1017.

Kenngott, A., nephrite from Jordansmühl in Silesia, 1119.

- priceite, colemanite, and pander-

mite, 1117. Kent, W. H., and B. Tollens, milksugar and galactose, 647.

Kertész, A., detection of magenta in extract of archil, 1015

Kessler. See Gorboff. Kiliani, H., galactonic acid, 967.

- isosaccharin, 744.

— metasaccharin, 745.

— trihydroxyadipic acid, 967.

Kimball, J. P., specular iron ores of

Cuba, 356. Kinch, E., composition of the food of Scotch hill sheep, 291.

Kingzett, C. T., rape-oil, beef fat, and mutton dripping, 446.

Kinkelin, F., preparation of meta-nitrocinnamaldehyde, 791.

Kinkelin. See also Miller. Kinnicutt, L. P., and R. C. Sweetser, Schulze's process for the determination of the halogens in aromatic compounds, 1010.

Kirchner and others, ensilage experiments with various fodders, 422.

Kirchner. See Wüst.

Kissel, constitution of nitroparaffins,

Kleemann, S., method of preparing diacetyl cyanide, 505.

Kleemann, S., and W. Wense, a-diamidophenanthraquinol, 1240.

Klein, D., action of tellurous and tel-

luric acids on paratungstates, 218. Klein, D., and J. Morel, action of nitric acid on tellurium, 16.

- --- action of water and nitric acid on basic tellurium nitrate, 17. - ---- tellurious anhydride, 870.

Klein, G., adulteration of linseed cake and rape cake, 425.

- experiments with manures containing thiocyanates, 76.

Klein, W., optical modifications produced in crystals by the action of heat, 622.

Klemenčič, I., dielectric constant of certain gases and vapours, 1030.

Klenze, digestibility of cheese, 1252. Klinger, H., and R. Pitschke, oxi-

dation of paratoluidine, 151. - siegburgite, 220.

Klingemann. See Anschütz. Klobukoff, N. v., alkaline tetrathionates, 1110.

- apparatus for the determination of vapour - densities at low temperatures, 9.

Klobukoff, N. v., estimation of vapour-densities of liquids of high boiling point, 9.

relation between molecular structure and absorption of light, 1173.

volumetric estimation of sulphur, 1159.

Klopsch, R., benzo-β-naphthylamide and  $\beta$ -dinaphthylamine, 990

Kluge, P., mono- and di-chloro-

xylene: chloroparaxylidine, 1208. Knapp, F., preparation of ultramarine blue from silica, 847.

Knauer, F., and others, peculiarities and cultivation of the beet-seed, 587.

Knieriem, W. v., assimilation of cellulose, 916.

Knop, A., augites of the Kaiserstuhl Mountains, 734.

Knop, W., remarks on the analysis of soils, 193.

Knorr, L., action of ethylic diacetosuccinate on ammonia, 994.

- action of ethylic diacetosuccinate on ammonia and primary amines, **554**.

- action of ethylic diacetosuccinate on phenylhydrazine, 995. - synthesis of furfurane-derivatives

from ethylic diacetosuccinate, 247. Knorr, L., and O. Antrick, constitu-

tion of quinoline, 273. Knorr, L., and A. Blank, action of

ethylic acetobenzalacetate on phenylhydrazine, 810.

- - action of ethylic benzoylacetate on phenylhydrazine, 555.

Knorr, L., and F. Jödicke, action of ethylic nitrobenzoylacetoacetates on phenylhydrazine, 1247.

Knorre, G. v., paratungstates, 1184. - tungstates of barium, strontium,

and calcium, 486.

Knorre, G. v., and P. Olschewsky, potassium and sodium salts of anti-monic acid, 1184.

Knorre. See also Ilinski.

Knudsen, P., phenylethenylamidoxime, 897.

 derivatives of phenylethenylamidoxime, 1218.

Kobert, R., constituents of ergot of rye, 821.

Koch, A., new locality for vivianite,

Koch, F., analysis of Transylvanian minerals, 735.

Koch, L., manuring experiments with Chili saltpetre, 187.

Koch. See also Curtius.

Koechlin, H., new chrome mordanting process, 208.

Köhler, H., formation of anthracene,

Köhnlein, B., exchange of chlorine, bromine, and iodine between inorganic and organic compounds, 35.

Kölliker, A., derivatives of triphenylcarbinyl bromide, 990.

König, F., analysis of cotton seeds,

König, G. A., orthite from Virginia,

König, J., a new germinator, 419.

- investigation of bone meal, 851.

— manuring experiments, 1009.
— poisonous effects of ammonium thiocyanate, 76.

König, J., and others, ensilage and acidification of green fodder, 183.

Königs, W. See Comstock, Feer,

Geigy. Körner. See Fischer, Weddige. Kohlrausch, F., electric conductivity of water, 323.

Ο., Kohlrausch, preparation sugar from Sorghum saccharatum, 1021.

Kohlstock. See Claus.

Kohn. See Nölting.

Kohnstein, B., determination of free

sulphuric acid in vinegar, 933. Kohnstein, B., and F. Simand, determination of the free acids contained in tannin liquor, 935.

Kolbe, H., chemical constitution of isatin, 665.

--- isatin, 58.

- preparation of anthranilic acid, 159.

Kolenko, B., pseudomorphs of horn-blende after olivine, 1188.

Kollert, J., electricity of flame, 2. Kolliker. See Allen. Kolotoff, action of amines on methaldehyde, 647. Kondakoff, T., action of chlorine on

trimethylethylene, 736.

Konono witz, N., isopropylallyl dimethyl carbinol, 497.

Koosen, J. H., depolarisation of an electric cell by bromine, 3.

Koreff. See Goldschmidt. Korn, O., dinaphthyldiquinone, 392.

Kosmann, clays, 1020.

Kossel, A., adenine, 1080.

guanine, 286.

- new base occurring in the animal organism, 566.

peptone-like constituent of the cell nucleus, 572.

Kostanecki, S. v., and S. Niementowski, isomeric dihydroxydimethylanthraquinones, 1240.

Kostanecki, S. v., and S. Niementowski, synthesis of nitrococcusic acid, 531.

Krafft, F., and T. Brunner, residue obtained by the distillation of castor oil in a vacuum, 373.

Krakau, A., action of alkalis on cinchonine and other cinchona alkaloids,

Kranzfeld. See Bamberger.

Kratschmer, carbohydrates in human liver, 679.

Krebs, G., an elementary demonstration of Avogadro's law, 13.

Krechel, G., analysis of white carrot fodder, 292

Kreckeler, K., and B. Tollens, methylhydroxyglutaric acid from levulinic acid, 1202. Kremser, W., variations in rainfall,

Krenner, A., minerals of the cryolite group from Greenland, 27.

Krenner, J., optical properties of allacite, 731.

Krenner, J. A., orpiment and realgar from Bosnia, 730.

stibnite from Japan, 221.

Kreusler, U., quantitative estimation of nitrogen, 430.

Kreysler, E., phosphates of the

phenols, 1054.

- reactions of the phosphates of the aromatic series, 1055. Krippendorff, F., hydroxycomazine,

 $12\overline{43}$ .

Krohn, L. M., analysis of red wine by means of electrolysis, 298.

Krüger, A., monochoro-xylenes and their oxidation products, 1053.

Krüger, P., derivatives of benzenylamidoxime, 895.

Krüger. See also Tiemann. Krüss, G., copper peroxide, 124.

· influence of temperature on spectroscopic observations, 209.

· quantitative spectrum analysis, 835.

relation between the composition and absorption spectra of organic compounds, 949.

- standardising solutions of potassium permanganate, 1013.

Kruis, C., reducing power of certain sugars, 1013.

Krukenberg, C. F. W., chemical constitution of cartilage, 405. --- conchiolin, 826.

Krukenberg, C. F. W., and H. Wagner, carnine, 674.

- composition of the contra tile tissues, 920.

Kubierschky, C., thiophosphoric acids, 632.

Kuckert, O., action of alkylamines on ethyl acetoacetate, 751.

Kudelka, F., and M. Hollrung, large and small hulled beet-root seed, 832.

Kügelgen, A. v., detection of sanguinarine and chelidonine, 608.

Kühn, B., action of phenyl isocyanate on amido-compounds, 260, 979.

Kühne, W., and R. Chittenden, new forms of albumose, 278.

Kulz, E., action of trichlorethyl- and trichlorobutyl-alcohol in the animal organism, 283.

- cystone, 140.

new lævorotatory substance (pseudohydroxybutyric acid), 284.

Kundt, A., electromagnetic rotation of the plane of polarisation of light by iron, nickel, and cobalt, 5.

Kuntze, L., parallel experiments on peat dust and Chili saltpetre as manures for sugar-beet, 429.

Kunz, J., manufacture of milk-sugar in Switzerland, 848.

## L.

- Laar, C., possibility of several structural formulæ for the same chemical compound, 722.
- Lach, B., shaded and unshaded sugarbeets, 1155.
- treating vegetable tallow, 1275.
- valuation of ozokerite, 1266.
- Lach. See also Degener. Lachowicz, B., and M. Nencki, parahæmoglobin, 1251.
- La Coste, W., estimation of vapourdensities at a diminished pressure, 1180.

quinoline iodides, 814.

- La Coste, W., and J. Bodewig, methylformylorthamidochlorohenzoic acid and methylpseudochlorisatin, 792.
- Lacroix, A., accidental formation of cerusite crystals on Roman coins,
- artificial gypsum crystals, 226. — diagnosis of zeolites, 1187.
- wulfenite from Beaujolais, 226.
- Ladenburg, A., derivatives of di-methylpiperidine, 565.
- synthetical pyridine and piperidine bases, 992.
- Ladenburg, A., and C. F. Roth, commercial picoline, 557.

Ladenburg, A., and C. F. Roth, isolation of the so-called α-lutidine,

– a new lutidine, 994.

Ladureau, A., ammoniacal ferment,

- sugar-beet and phosphates, 1157. Lafon, P., new reaction for codeine,

- new reaction of digitaline, 1014.

Lafont. See Bouchardat.

Lagarde. See Thoulet.

Lagorio, A., crystallographic form of hæmin, 567.

Lailler, A., elimination of phosphoric acid in the urine in insanity and epilepsy, 73. Lajoux. See Grandval.

Landolt, H., laboratory apparatus, 481.

Landrin, E., adulteration of pepper with olive residues, 451.

Landshoff, L., preparation of naphthylamine compounds, 312.

Landwehr, H. A., assimilation (resorption) of fat, 999.

Lang, E., diisobutylketine, 963.

Lang, J., bauxite from Langsdorf, 357.

Langbeck, H. W., detection of adulterated essential oils, 599.

Lange, M., formation of rosaniline by

the nitrobenzene process, 1130. Langer, C., and V. Meyer, density of sulphurous anhydride at a white heat, 950.

Langer, J., isomeric thiophensulphonic acids, 765, 887.

Langlebert, A., Convallaria majalis (lily of the valley) 271.

Langley, S. P., amount of atmospheric absorption, 319.

Larkin, T., new sulphate furnace, 1268.

Larsen. See Elbs.

Lasaulx, A. v., pseudomorphs after rutile, 28.

Lasch, K., sodium nitroprusside as a reagent for sugars, 600.

Lauber, E., "red spots" in light rose dye, 108.

Lauber, E., and C. Weinreb, chromium chlorate, 1272.

Lauch, R., preparation of additive products of hypochlorous acid, 1194.

Laujorrois, potassium dichromate as an antiseptic, 704.

Lauth, C., moulding of porcelain, 307.

Lawes, Sir J. B., ensilage, 1088, 1255. Lawes, Sir J. B., and J. H. Gilbert, composition of soils, fertility of the Manitoba prairie soils, TRANS., 380.

Lawes, Sir J. B., and J. H. Gilbert, continuous growth of wheat at Rothamsted from 1864-1883, 583.

Lawson, T. A., action of diazo-compounds or  $\beta$ -naphthylamine, 802. - a- $\beta$ -diamidonaphthalene, 1238.

Lazarus, M.G., fractional distillation in a current of steam, 716, and Proc., 46. Lazarus. See also Friedlander.

Lea, M. C., combinations of silver salts with colouring matters, 611.

- combinations of silver chloride, bromide, and iodide with colouring matters, 350.

Leather. See Anschütz.

Lebedeff, reduction of cetyl iodide, 736.

Le Bel, J. A., and M. Wassermann, reduction of hexahydric alcohols, 1046. Le Canu, J. A., compound of ethyl

acetate with calcium chloride, 371. Lechartier, G., application of the

densimeter to cider must, 842. employment of cider mark as

manure and fodder, 834. - employment of potash manures in Brittany, 83.

Le Chatelier, H., chemical reactions in the setting of hydraulic mortar, 306.

- decomposition of salts by water, 630. - dissociation of chlorine hydrate, 474.

— laws of solution, 340, 473.

- general state of the laws of chemical equilibrium, 117.

Ledebur, A., crucible steel, 616. oxidation and reduction, 631.

Leeds, A. R., composition and methods of analysis of human milk, 282.

Leff mann, H., examinations of butter,

Lefort, J., arsenic in mineral waters,

Léger, E., phenolphthaleïn as an indicator, 931.

Lehmann, C., effects of alkalis and acids on respiration, 279.

Lehmann, O., crystallisation, 215.

— melting points of substances in contact, 330.

spontaneous change of form of homogeneous solid substances, 1033.

Lehmann, T., estimation of alkalis in urine, 609.

Lehmann, V., self-fermentation of yeast, 1151.

Lellmann, E., constitution of dinitroparaxylenes, 973.

- general method for determining the constitution of aromatic diamines, 976.

----- toluylenediamine, 976.

- theory of benzene, 251.

Lellmann, E., and R. Grothmann, derivatives of salicylic acid, 265.

Lellmann, E., and E. Würthner, chemical behaviour of aromatic and fatty diamines, 977.

- -- new nitrotoluidine, 974.

Lemberg, K., formation and alteration of silicates, 1187.

Le Nobel, new terpene, 668.

- testing for acetone in acetonuria, 449.

Lenz, W., titrations with potassium permanganate solution, 598. - pepper powder, 701.

Leo, H., formation and migration of fat in phosphorus poisoning, 1002.

Léon-Soubeiran, J., wood oil from Cochin China, 394.

Lepéz. See Zulkowsky.

Lépine, R., and P. Aubert, relative toxic effect of the organic and saline constituents of urine, 1085.

Leplay, H., selective fermentation of invert sugar, 1152.

 vegetation of the sugar-beet in the second year, 293.

Lepsius, B., dissolved oxygen in deep well waters, 1266.

Lerch, J. U., chelidonic acid, 45. Le Roux, F. F., inversion of the electromotive force of a copper-iron junction at a high temperature, 110.

Leuckart, R., reactions of aromatic cyanates, 773.

symmetrical and unsymmetrical dimethylsuccinic acids, 1200.

tion of phenyl cyanate on phenols, 1224.

Levallois, A., estimation of fragrant essential oils, 301.

- optical activity of cellulose, 369.

- rotatory power of solutions of cellulose in Schweizer's solution, 500. L., benzylhydroxyanthranol, Levi, 1240.

Levinstein, I., preparation of nitroderivatives of aromatic amines, 1127.

Levy, S., constitution of chloranilic acid, 1210.

Lewis, H. C., American locality for helvine, 227.

Lewis, J. W., crystalline form of miargyrite, 1116.

Leymann, H., action of  $\beta$ -chlorethylenesulphonic chloride on aniline, **786.** 

L'Hote, purification of zinc containing arsenic, 307.

Lid off, A., formation of hydroxylamine, 722.

Lidoff, A., solubility of fibroin, 406.

Lieben. See Haitinger.

Liebenberg, A. v., influence of intermittent heat on the germination of seeds, 419.

Liebermann, C., behaviour of α-naphthaquinone and benzoquinone towards sulphuric acid, 802.

--- cochineal and carmine, 1076.

--- constitution of alkyl hydroxyanthranols, 1240.

---- oxyquinoterpene, 1075.

the wax and fat of cochineal, 1045.

Liebermann, C., and S. v. Kostanecki, reactions dependent on position, 1209.

Liebermann, L., estimation of milk fat, 695.

Liebisch, T., apparatus for measuring the angle of the optic axes, 622.

Liebscher, G., bitter milk, 105.
——cultivation of Swedish and German

cereals, 422.
—— cultivation of various sugar-beets, 424.

manuring sugar-beet, 429.

Liechti, L., and W. Suida, behaviour of different ferric oxide mordants with silk, 315.

oil, 315. composition of Turkey-red

Limpricht, H., azobenzene-thiosulphonic and -sulphinic acids, 984.

----- hydrazine-compounds, 1216.

nitrotoluidines, 974.
 oxidation of amidobenzene-sulphonic acids, 984.

sulphonic and disulphonic acids, 1232.

Lindet, L., gold phosphobromides and phosphochlorobromides, 1115.

Lindner, J., bromonitrophenols and their amido-derivatives, 774.

Lindt, O., microchemical test for brucine and strychnine, 449.

Linnemann, E., absorption phenomena of zircons, 1173.

 extraction of zirconia and the qualitative composition of zircons, 1042.

— oxidation of propylene oxide, 1044. Linossier, G., volumetric estimation of iron, 840.

Linossier. See also Cazeneuve.

Lipp, A., methylated indoles, 167.

Lipp. See also Schneider.

Lippmann, E., action of benzoic peroxide on amylene, 366.

Lippmann, E., and F. Fleissner, cyanhydrins of nitroso-compounds, 1212. Lippmann, E. v., and others, preparation of sugar from molasses, 102.

Lippmann, E. O. v., non-identity of arabinose and galactose, 41.

occurrence of leucine and tyrosine in beetroot molasses, 245.

Livache, A., preparation of standard solutions of carbon bisulphide, 84.

Liveing, G. D., and J. Dewar, spectral lines of metals developed by exploding gases, 317.

spectroscopic studies on gaseous explosions, 465.

Ljubavin, N., investigation of a saltpetre earth from Turkestan, 128.

Lloyd, J. U., separation by capillary attraction, 477.

Lloyd, R. See Mabery.

Lobry de Brüyn, C. A., action of hydrocyanic acid and of dilute sulphuric acid on aldol, 240.

action of potassium cyanide on

metadinitrobenzene, 656.

action of potassium cyanide on ortho- and para-dinitrobenzene, 657.

in the benzene nucleus, 972.

- propenylglycollic acid, 242.

propionic acid and some of its derivatives, 963.

- replacement of the NO<sub>2</sub>-group by an oxy-alkyl group, 657.

Loczka, J., smithsonite from Pelsöcz Ardó, 730.

— wollastonite from Rézbánya, 734.

Lodge, O., seat of the electromotive force in the voltaic cell, 1027.

Lodin, brown coal of Istria and Dalmatia, 125.

new mineral from Godemas, 230.

Loeb, M., action of carbonyl chloride on ethenyldiphenyldiamine, 1213.

Löbbecke, manuring experiments with precipitated phosphate, 429.

Löe. See Plöchl.

Löfasz, J. F., separation of kainite from rock salt, 614.

Loew, B., microchemical detection of nuclein, 610.

Loew, O., albumin and its oxidation, 823.

different degrees of resistance in protoplasm, 827.

—— poisonous action of hydroxylamine, 830.

Löw, W., action of fuming nitric acid on paraxylene bromide, 1208.
——indigocarboxylic acid, 799.

Löwe, J., use of lime-water in zinc gasometers, 835.

Lohse, O., isochromatic gelatine plates,

Lommel, E., a freezing apparatus,

· variation of induction machines, 1098.

Long, J. H., phenolphthaleïn as an indicator, 835.

Longi, A., estimation of nitrogen in saps, &c., 1092.

- volumetric estimation of nitric acid, 595.

Longmore, J., preparation of a dyestuff from cotton-seed oil, 108.

Lopatkin, M., action of allyl iodide and zinc on epichlorhydrin, 497.

Lorenzen, analyses of metallic iron from Greenland, 639.

Lorin, a particular case of catalytic action, 481.

Losanitsch, S. M., direct replacement of the amido-group in aromatic

amines by halogens, 521.

Lossen, W., structure of hydroxylamine-derivatives, 895.

Louguinine, W., heats of combustion of certain carbon compounds, 327.

- heats of combustion of ethereal

salts of fatty acids, 327.
Lovén, J. M., some new sulpho-derivatives of the fatty acids, 241.

Lowe. See Dixon.

Luchsinger. See Glause, Hess. Ludeking. See Wheeler, Wiede-

Ludwig, R., hydroxybenzaldehyde and coumaric acid, 663.

Ludwig. See also Classen. Lueger, clarification of turbid riverwater, 198.

Lumpp. See Hell. Lundin, E., estimation of arsenic in iron and iron ores, 838.

Lunge, G., density of sulphuric acid,

estimation of potassium permanganate and of pyrolusite by means of hydrogen peroxide, 1162.

existence of gaseous nitrous anhydride, TRANS., 457.

- modification of the nitrometer for use as a ureometer, &c., 1267.

- reaction between nitric oxide and oxygen, Trans., 465.

recovery of sulphur from hydrogen sulphide, 454.

- reducing action of coke on nitric acid, 936.

- solubility of nitric oxide in sulphuric acid, 954.

Lunge, G., V. Meyer, and E. Schulze, fusel oil in spirit, 708.

Lupton, N. T., analyses of bituminous coals from Alabama, Tennessee, and Kentucky, 1185.

meteoric iron from Coahiula, Mexico, 880.

Luzzatto, M., Liebig's method for the estimation of carbamide, 610.

Lwoff and Chéchoukoff, action of hydrochloric acid on isopropenyl carbinol, 647.

Lyte, F. M., sodium aluminate, 638.

#### M.

Maas, H., Buchmann and Wasmund, putrefaction alkaloïds in boiled meat, 676.

Maben. See Dechan.

Mabery, C. F., β-bromotetrachloro-propionic acid, 508.

Mabery, C. F., and R. Lloyd, a- and  $\beta$ -chlorodibromacrylic acids, 510.

Mabery, C. F., and H. H. Nicholson, β-dibromo-dichloropropionic acid and β-bromodichloracrylic acid, 507. Mabery, C. F., and G. H. Palmer,

orthiodotoluenesulphonic acid, 538.

McCay, L. W., reduction of arsenic acid solutions by means of sulphurous anhydride, 634.

- Reichert's method of butter analyses, 197.

Mac Ewan, P., detection of phenol in creasote, 1013.

- testing Peruvian balsam, 602.

McGowan, G., trichlorethylsulphonic acid and the derivatives of methylsulphonic acid, 367.

Machenhauer, F., preparation of a yellow rosaniline dye, 310.

McKelvey, J. W., siliceous earth from Morris Co., New Jersey, 361.

Mackey. See Mills.

Mackintosh, J. B., analysis of titanic iron from Brazil, 878.

estimation of graphite in minerals,

volumetric estimation of manganese: influence of organic matter and iron, 85.

Mackintosh. See also Hidden.

McLeod, H., sunshine recorder, 320. MacMunn, C. A., chromatology of the actiniæ, 1251.

enterochlorophyll, 1242.

Madan, H. G., refractive power of metacinnamene, Proc., 106. Mähly. See Friedlander.

Märcker, M., Chili saltpetre or ammonium sulphate, 1156.

Märcker, M., frothy fermentation, 1168.

- manurial value of peat waste, 687. -- loss of weight in the ensilage of beet leaves, 423.

— potash manures for potatoes, 83. — properties of malting barley, 1169.
— Sidney guano, 429.

- solution of wool-dust, 428.

- value of sugar as food for stock, 1149. Märcker, M., and others, drying of "diffusion cuttings," 79.

Märcker. See also Beseler. Magnaghi. See Ciamician.

Mairet, Pilatte, and Combemale, action of antiseptics on higher organisms; iodine and silver nitrate, 1253.

- action of antiseptics on higher organisms: thymol, 1085.

Maisch, H. C. C., stearopten from essence of patchouli, 394.

Malbot. See Duvillier.

Mallat, A., determination of starch in gluten bread, 445.

Mallet, F. R., native lead and chromite from the Andaman Islands, 1185. Mallet, J. W., meteoric iron from

Wichita Co., Texas, 493. Maly, R., andesite from Trifail, in Steiermark, 735.

oxidation of albumin, 824.

Mandelin, K. F., aconitine, 911.

Mangin. See Bonnier. Manhés, P., extraction of nickel and cobalt from their ores, 204.

Mann, C., test for citric acid, 843.

Mann. See also Claus.
Mann, P., chemical composition of augites from phonolites and similar rocks, 34.

Manoury. See Fromentin. Manzoni, G. S., chromium and aluminium sulphates, 725.

preparation of sodium hyposulphite, 723.

Maquenne, sulphur liberated by the decomposition of hydrogen persulphide, 1037.

Maquenne. See also Dehérain.

Marcano, V., peptonic fermentation,

Marcano. See also Muntz. Mareck. F., electrolytic preparation of nitrogen chloride, 347.

Margary, L., derivatives of a- and  $\beta$ -naphtholazobenzene, 546.

synthesis of dyes on tissues, 710.

Margottet. See Hautefeuille. Marignac, C., and also O. Lehman, crystallisation, 215.

Markownikoff, V., astrakhanite, 732.

- Turkestan manna, 943.

G., Japanese bronzes, Marquard,

Martinon, action of hydrogen peroxide on phenols, 658.

— estimation of hydrogen peroxide,

- reducing action of hydrogen peroxide, 1036.

Marx, L., comparison of the barleys of different countries, 422.

Mason, W. P., viscosity of oils, 196. Massol. See Léon-Soubeiran.

Masson. See Dobbin, Hay. Masure, F., evaporation of water into the atmosphere, 1260.

Mathieu-Plessy. E., acetic acid and alkaline thiosulphates, 1038.

Maugini, F., meteoric sand, 231. Maumené, E. J., alleged elective fermentation, 1085.

- decomposition of cupric oxide by heat, 124.

 existence of manganese in plants and animals, 421.

Mauthner, J., cystine, 822.

Mayer, A., feeding value of various roots, 1259.

-valuation of hay by chemical analysis, 699.

Mayrhöfer, estimation of nitric acid in potable water, 691.

Mazzara, G., action of potassium nitrite and phenols on diamidotriphenylmethane, 800.

- azo-derivatives, 904.

- constitution of phenylazothymol, 1131.

- diamidotriphenylmethane, 904. --- phenylazocarvacrol and diphenylazocarvacrol, 1132.

Mazzara, G., and G. Posettö, azoderivatives of thymol, 893.

- — diamidomethoxytriphenyl-

methane, 1141. Mebus, E. A., and J. W. Decastro, preparation of strontium carbonate, 1269.

Medicus, detection of saccharose in wine, 693.

Méhu, C., examination of urine for albumose and peptone, 451.

Meldola, R., constitution of the haloid derivatives of naphthalene, TRANS., 497. - secondary and tertiary azo-com-

pounds, Trans., 657.

Melikoff, homologues of glycidic acid,

Mendeleeff, D., distillation of American petroleum, 708.

- phenomena of condensation, 114. - specific gravity of sulphuric acid, 121.

Mendini, D., monobromo- and dibromocitraconimide, 1126.

Menges, C. L. R. E., apparatus for breaking electric circuit in an atmosphere of hydrogen, 3.

Menke. See Jackson.

Mennel, E., nitrogenous derivatives of comenic acid, 1203.

Menzies, W. J., purification of sulphuric acid, 304.

Merck, E., cocaïne, 565.

Merck, W., artificial cocaine, 1249.

– benzoylecgonine, 997. Mering, J. v., physiological action of potassium chlorate, 1002.

Mering. See also Thierfelder.

Merz. See Gasiorowski.

Messerschmitt, J. B., spectrophotometric observations, 1097.

Messinger, J., thioxylen from coaltar, 767, 1052, 1205.

Meunier, J., benzene hexabromide, 1126.

— benzene  $\beta$ -hexachloride, 518.

- isomeride of benzene hexachloride,

- new modes of formation of catcchol, 1059.

Meunier, S., deposit from a spring at Carmaux, 644.

- synthesis of anorthite, 960.

Meyer, A. B., unwrought jadeite from Switzerland, 1188.

Meyer, E. v., isatoic acid, 666.

action of ethyl chlorocarbonate on nitrogenous organic compounds, 140.

Meyer, E. v. See also Riess. Meyer, F., earth-nut and rye-meals as

food for milch cows, 1252.

Meyer, L., and A. Schenfelen, chlorine and bromine carriers, 1182.

Meyer, L., and K. Seubert, atomic weight of silver: Prout's hypothesis, TRANS., 434.

- unit adopted for the atomic weights, TRANS., 426.

Meyer, O., simple method of examining yeast, 452.

Meyer, P. See Anschütz.

Meyer, V., constitution of thiophenderivatives, 763.

- preparation of pure thiophen, 141. - synthesis of thiophen, 515.

the thiophen-group, 1051.

 thitolen and thiophen, 887. Meyer, V., and G. G. Pond, physicochemical experiments, 1033.

Meyer, V., and O. Stadler, direct preparation of dibromothiophen from coal-tar benzene, 971.

nitration of thiophen, 141. - the thiophen-group, 250.

Meyer, V. See also Langer, Lunge. Michael, A., the glucoside-group, 521.

Michael, A., and G. M. Palmer. action of sodium phenylsulphinate on methylene iodide, 536.

- conversion of organic isocyanates into thiocarbimides, 526.

 properties of phenylsulphonacetates, 986.

Michael, A., and J. F. Wing, action of methyl iodide on asparagine, 968.

additive compound of phenylhydrazine and hydrogen chloride, 963.

optically inactive aspartic acid, 377.

Michael, R., carboxylic acids from synthetically prepared pyridine bases, 60.

· synthesis of pyridine-derivatives from ethyl acetoacetate, aldehydes, and ammonia, 1244.

Michaelis, A., acetone phosphorus compounds, 747.

Michaelis, A., and W. La Coste, phenoxydiphenylphosphine, 1214.

michaelis, A., and U. Paetow, benzylarsines, 526.

Michaelis, A., and H. v. Soden, anilides of orthophosphoric acid, 1134.

- triphenylphosphine and its derivatives, 1134.

Michaelis, C., electric conductivity of impure mercury, 322.

Michailoff, W., new reaction for albuminoïds, 198.

Michel-Lévy, determination of the double refraction of minerals, 621.

Miers, H. A., crystallography of bromostrychnine, TRANS., 144.

crystallography of tricupric sulphate, Trans., 377.

Mihailoff, animal colouring matters, 676.

preparation of albumin, 69.

Miklucho-Maclay, M. v., listwaenite from the Poroschnaja Mountain near Nischne-Tagilsk, 224.

-rutile and cassiterite in the Greifenstein granite, 1185.

Miller, a-naphthaquinone, 667.

preparation of canarine, 365.

Miller. See Doebner.

Miller, A. K. See Armstrong. Miller, N. H. J. See Japp.

Miller, W. v., and F. Kinkelin, αmetadiquinoline, 1144.

Millot, A., oxidation of carbon in the electrolysis of a solution of ammonia, 1125.

Mills, E. J., melting points and boiling points as related to chemical composition, 329.

—— the numerics of the elements, 344. Mills, E. J., and W. M. Mackey, lines of no chemical change, 341.

Milone, H., salts of salicylic acid, 1139.

Minangoin, N., cultivation of sorghum in France, 79.

Minkowski, O., hydroxybutyric acid in diabetic urine, 413.

— occurrence of hydroxybutyric acid in the urine in cases of diabetes mellitus, 413.

Minnigerode, B., the symmetry and elasticity of crystals, 1105.

Möhlau, R., diphenylpseudoamphiphenacylnitrile, 560.

Moehsin Bey Chanlaroff, butyrolactone and α-ethylbutyrolactone, 374.

Möller, H., respiration in plants, 832. Möller, W., law of emanation of light from incandescent substances, 623.

Mohl. See Willgerodt.

Mohr, C., estimation of reverted phosphoric acid, 688.

Moissan, H., action of the induction spark on phosphorous trifluoride, 215.

--- combination of bromine with phosphorous trifluoride, 955.

—— phosphorus trifluoride, 15.

— potassium chromocyanide, 738.

— preparation of phosphorus tri-

fluoride, 482.

Molisch, H., deviation of roots from the normal direction of growth, 1153.

Monari, A., new sulphonic acids, 970. Mond, L., recovery of hydrochloric acid as bye-product in the ammonia-

soda process, 199. Moody, W., celestine, 458.

Moore, G. E., and V. v. Zep harovich, calaite, pseudomorphous after apatite, from California, 958.

Moore, R. W., Hübl's method for the examination of oils and fats, 1014.

 Koettstorfer's method for the examination of butter for foreign fats, 300.

Moore, T., separation of zinc from nickel, 193.

Morel. See Cazeneuve, Klein.

Morgen, A., composition of inferior hay, 292.

Morin, H., action of cadmium on ammonium nitrate, 1039.

Morley, H. F., and A. G. Green, action of zinc ethide on propylene chlorhydrin benzoate, TRANS., 134. Morley, H. F., and A. G. Green, constitution of propylene chlorhydrin, Trans., 132.

Morris. See Brown.

Morse, H. N., apparatus for the correct reading of gas volumes over water, 1009.

- determination of the value of zinc dust, 1012.

Morse, H. N., and E. H. Keiser, apparatus to determine the equivalents of certain elements, 481.

Moulton, C. W., estimation of nitric acid, 930.

Muchall. See Claus.

Müllenhoff, R., heat of formation of ferrous sulphide, 950.

Müller, feeding with dry and steeped maize, 1149.

Müller and others, progress in metallurgy, 1167.

Müller, A., filtration of sewage through

peat, 1268.

Müller, A. See Willgerodt, Zimmermann.

Müller, G., benzenylamidoxime carboxylic acid, 1227.

Müller, H., preparation of indigo, 850.

— preparation of potassium sulphate, 1268.

Müller, H. W. See De la Rue. Müller, M., purple of Cassius, 352.

Müller, W., estimation of dextrose in urine by the polarimeter, 702.

Müller, X., Weiller's silicon bronze, 308.

Müller, X., Weiller's silicon bronze, 308.
Müller-Erzbach, W., tension of aqueous vapours of hydrated salts, 213.

Müller-Jacobs, A., determination of the nature of the crude oil in Turkeyred oil, 95.

--- Turkey-red oil, 313.

Muencke. A., apparatus for preparing pure carbonic anhydride, 634.

Müntz, A., oxidation and reduction under the influence of microscopic organisms in the soil, 1151.

— oxidation of iodine during nitrification, 870.

Muller, A., action of carbonic anhydride on potassium chloride in presence of amines, 1038.

----- extraction of amines from commercial methylamine, 501.

heats of formation of salts of the amines, 716.

Munk, I., absorption, formation, and storage of fat in animals, 827.

— assimilation of fats, 1148.

Munk, J., and C. v. Voit, influence of asparagine on the elimination of albumin, 412. Munro, J. M. H., ash of strawberries,

- black soil from Manitoba, 834.

Muntz, A., and E. Aubin, combustible organic matter in the air, 118.

Muntz, A., and C. Girard, alimentary value of oats, 281.

 digestibility of substances used as food for horses, 282.

Muntz, A., and V. Marcano, forma-tion of deposits of nitrates in tropical regions, 1042.

Muspratt, E. K., and G. Eschellpreparation of potassium chlorate, 17.

- preparation of sodium chlorate, 17.

Mylius, F.,  $\alpha$ - and  $\beta$ -hydrojuglone, 169. --- hydroxyjuglone, 803.

- pipitzahoic acid or perezone, 777.

#### N.

Nageli. See Tiemann.

Nahnsen, R., action of ethyl chlorocarbonate and sodium amalgam on dinitrothiophen, 1207.

- the thiophen group, 50. — β-thiophenic acid, 51.

Nasini, R., specific refraction in refe-

rence to the double bond, 210. Nasini, R., and O. Bernheimer, relation between refractive power and chemical constitution, 1097.

Natanson, E. and L., dissociation of nitrogen tetroxide, 862.

Natterer, K., action of zinc ethyl on a-y-dichlorocrotonaldehyde, 497.

- dichlorether, 365.

-- parachloraldehyde, 1196.

Natton, kola nuts, Sterculia acuminata, 712.

Naudin, L., anthememe, a hydrocarbon from Roman chamomile, 37.

Naumann, A., dissociation tension of ammonium carbamate, 859.

 Kahlbaum's so-termed specific remission, 717.

Naumann, A., and C. Pistor, reduction of carbonic anhydride to carbonic oxide by carbon, 1036.

Naylor, W. A. H., hymenodictyonine,

Neesen, F., influence of magnetisation on the resistance of magnetic liquids,

Nemirowsky, J., action of carbonyl chloride on glycol chlorhydrin, 741.

Nencki, M., albumin of the splenic fever bacilla, 177.

Nencki, M., and Bourguin, rhodenic acid, 40.

Nencki, M., and N. Sieber, colouring matter of the blood, 69, 825.

Nencki. See Lachowicz. Neugebauer, E. L., ethylic γ-hydroxy-

valerate and γ-hydroxyvaleramide,651. Newbury, S. B., action of light on silver chloride, 956.

specimens of nickel ore from Nevada, 489.

Nicati, W., and Rietsch, odour and poisonous effects of the products of the fermentation produced by the comma bacillus, 180.

Nichols, E. L., duration of colour im-

pressions on the retina, 468.

Nicholson. See Carpenter, Mabery. Nicol, W. W. J., boiling points of sa-

line solutions, 331.

- connection between pseudo-solution and true solution, 115.

- molecular volume of saline solutions, 334.

- saturation of salt solutions, 340.

Niemeyer, M., chlorinated quinones and quinols, 1065.

Nietzki, R., and T. Benckiser, benzene-derivatives obtained by the action of carbonic oxide on potassium, 1127.

- hexahydroxybenzene-derivatives and their relation to croconic and rhodizonic acids, 779.

orthonitranilinesulphonic acid; new method of preparing orthonitraniline, 535.

Nietzki, R., and O. Goll, azonaphthalene, 545.

Niementowski. See Kostanecki.

Nikitinsky, T., determination of the quantity of ash in tea, 845. Nobel, A. B., and G. Fehrenbach, preparation of sulphuric anhydride, 1018.

Nobel, Le. See Le Nobel. Nölting, E., azylines, 895.

--- orthonitrobenzyl chloride, 52.

- presence of isocyanates in the first runnings of the distillation of crude benzene, 463.

Nölting, E., and T. Baumann, azoderivatives, 385.

- --- derivatives of cumidine and amidoazobenzene, 384.

- derivatives of pseudocumidine, 893.

formation of quinones, 892. quinones, 390.

Nölting and Binder, diazamidoderivatives, 385.

Nölting and Forel, xylidines, 381. Nölting and Kohn, new cumidine, 383.

terephthalophenone, 389.

- tetramethylazyline, 386. Nölting and Weingartner, colouring matter from paramidophenol,

381. decomposition products of acetanilide hydrochloride, 978.

- ethenyldiphenyldiamine, 384. Nölting, E., and E. Wild, prepara-tion of mononitrophenols from their primary amines, 973.

Nölting, E., and O. N. Witt, liquid bye-product in the preparation of dinitrotoluene, 1095.

Nordenskjöld, A. E., uranium silicate from Garta, 1119.

Nordmann, E., ethenylamidoxime and its derivatives, 238.

- paracarvacrotic aldehyde, 162.

North, W., influence of bodily labour on the elimination of nitrogen, 412.

Norton, L. M., and A. W. Allen, action of dilute nitric acid on anilides,

Norton, L. M., and C. O. Prescott, continuous etherification, 496.

Notta and G. Lugan, detection of morphia in the urine, 447.

Nuth, G., action of paramidodimethylaniline on aldehydes, 784.

# 0.

Ogáta, M., poisonous nature of sulphurous anhydride, 577.

Oishi, H., Japanese camphor oil, 270. Oliveri, V., action of nitrous anhydride on parabromaniline nitrate,

estimation of tartaric acid in wine lees, 843.

Oliveri, V., and A. Denaro, quassin,

Oliveri. See also Canzoneri.

Olivier, L., method of measuring the chemical effect of radiation, 319.

Olschewsky. See Knorre.
Olszewski, K., liquefaction and solidification of methane and nitric oxide; 860.

- liquid carbonic oxide, 14.

- production of very low temperatures, 1101.

- solidification of nitrogen and car-

bonic oxide, 475.

- the use of boiling oxygen, nitrogen, carbonic oxide, and atmospheric air for producing cold, 1101.

VOL. XLVIII.

Osborne, T. B., separation of zinc and nickel, 593.

separation of zinc in ores, 595.

Osmond, calorimetric study of the effect of tempering and hammering on fused steel, 856.

 colorimetric estimation of manganese, 690.

determination of small quantities

of hydrogen sulphide, 688. Osmond and Werth, cellular struc-

ture of fused steel, 485.

Ost, H., nitrogenous derivatives of meconic acid, 48.

Ostermayer, E., action of iodine chloride on quinolives, &c., 672.

- action of phosgene gas on quinoline, 672.

caffeine chloriodide, 1250.

- diquinolines, 560.

 iodated azo-colouring matters, 673. - methochlorides of pyridine and

quinoline bases, 813.

 methiodides of the quinoline series, 672.

Ostermayer, E., and W. Henrichsen, syntheses of a diquinoline, 173. Ostermayer, E., and J. Rosenhek,

derivatives of the isomeric dinaphthols, 171.

Ostersetzer, J., nitrogen in artificial manures, 436.

Ostwald, W., electrochemical studies, 1029.

- electrical conductivity of acids, 3, 323.

inversion of cane-sugar, 882.

— trustworthiness of alternating currents for measuring electrical resistance, 856.

Ott, A., estimation of albuminoïds in urine, 451.

Ott, P., phenylhydroxypivalic acid, 663.

Otto, J. G., amount of sugar and reducing substances in blood, 827.

Otto, R., formation of sulphones from alkylsulphonated acids of the series  $C_n H_{2n} O_2$ , 536.

new synthesis of aromatic sulphones, 535.

Otto, R., and H. Beckurts, pyrocinchonic and dichloroadipic acids from a-dichloropropionic acid, 753.

Otto, R., and H. Damkohler, disulphones, 261, 537.

Otto, R., and A. Rössing, constitution of the sulphinic acids, 1231.

Otto. See also Beckurts.

Owens. See Japp.

#### Р.

Paal, C., acetonylacetone, 505.

action of phosphoric selenide on

acetonyl acetone, 1207.

— derivatives of ethyl acetophenonacetoacetate and of ethyl acetonylacetoacetate, 248.

synthesis of thiophene and pyrroline-derivatives, 516.

synthesis of thioxylen-derivatives, 1205.

Paal, C., and J. Tafel, thiophen from erythrite, 763.

 thiophen from mucic acid, 764.

Pabst. See Girard. Padé. See Dubois.

Pactow. See Michaelis. Page, A. G., action of chlorine on organic compounds in presence of inorganic chlorides, 36.

Page, C. C., amazon stone from Amelia Co., Virginia, 130.

Palmer. See Hill, Mabery, Michael.

Panaotovic, W., paramethylisatoic acid, 666.

Parenti. See Schiff.

Parmentier. See Chancel.

Parry, J., spectroscopic examination of the vapours evolved on heating iron, 318.

Paschkis, H., occurrence of phytosterin, 291.

Pasteur. See Eggeling.

Paucksch, H., derivatives of amideethylbenzenes, 255.

Paul, B. H., and A. J. Cownley, cupreine and homoquinine, 997.

 new alkaloïds of cuprea bark, 563.

Pavloffski, V., transferring photo-

graphs to porcelain or wood, 612.

Pawlewski, B., paraxylene in Galician petroleum, 1126.

Pechmann, H. v., acetonedicarboxylic

acid, 138.

 constitution of pyridine-derivatives derived from coumalinic acid, 558.

— synthesis of pyridine-derivatives; coumalinic acid, 175.

Pechmann, H. v., and J. B. Cohen, compounds of phenols with ethyl acetoacetate, 56.

Pechmann, H. v., and H. Stokes, action of ammonia on ethyl acetone-

dicarboxylate, &c., 1202. Pechmann, H. v., and W. Welsh, pyridine-derivatives from malic acid, 174, and TRANS., 145.

Pechmann. See also Dunschmann.

Peckham, S. F., origin of bitumens,

Peligot, E., carbon bisulphide in aqueous solution as a remedy for phylloxera, 77.

Pellet, H., animal charcoal in sugar refining, 205.

direct estimation of sugar in beet,

· simple estimation of sugar in beet, 1163.

- sugar-beet seed as fodder for cattle,

Pellizzari, G., amidobenzoic acid derivatives of succinic, sebacic, and phthalic acids, 533.

combinations of ammonia with ammonium salts, 723.

reduction of nitrobenzyl chloride, 770.

Penfield, S. L., occurrence of alkalis in beryl, 490.

Perkin, A. G., and W. H. Perkin, jun., derivatives of anthraquinone, TRANS., 679.

Perkin, W. H., jun., action of aniline on methyl dehydracetate, 761.

 benzoylacetic acid and derivatives, TRANS., 240.

dehydracetic acid, 515.

-synthetical formation of closed carbon chains, TRANS., 801.

 trimethylenedicarboxylic acid. 1049.

- trimethylene iodide, 495.

Perkin, W. H., jun., and G. Bellenot, paranitrobenzoylacetic acid, 794.

Perl, J., thiosulphonic acids and sulphinic acids of toluene, 391.

Perrey, A., use of copper sulphate to destroy mildew, 77.

Perrey. See also Hautefeuille. Perry, N. W., fusion, casting, dephosphorising, and plating of iridium,

Peter, A., acetothiënone and some of its derivatives, 141.

 β-acetothiënone and its derivatives, 764.

isomeric thiophenic acids, 765.

Peter, J., determination of non-volatile residue in wine, 692.

- estimation of sulphur in steel and iron, 1161.

Peter, J., and O. de Rochefontaine, crystallised anhydrous zinc acetate, 371.

Petermann, A., and C. Glaser, estimation of reverted phosphoric acid,

Petersen, nutritive value of hay grown on marsh lands, 929.

Peterson, H., determination of iron and chromium in alloys, 194.

Petit, A., assay of cinchona bark, 447. titration of organic matter in water, 841.

Pettigrew, H. P., oil of gaultheria,

Peyrou. See Gréhant.

Pfaundler, L., action of compressed carbonic anhydride on glass, 868.

Pfeiffer, E., electric conductivity of aqueous alcohol, 1029.

electric conductivity of solutions of carbonic anhydride, 212.

- influence of salts on certain digestive processes, 827.

Pfeiffer, T., estimation of urea, 450.

Pfitzinger, W., trimethylquinoline,

Pflüger, E., and K. Bohland, simple method of estimating nitrogen in urine, 608.

Pfordten, O. v. d., condensation of hydrocyanic acid, 1120.

formation of red silver solutions by reduction, 955.

new reagent for the absorption of oxygen, 836.

- purification of hydrogen sulphide from arsenic, 347.

v. Pfuel, cultivation of two varieties of sorghum and preparation of sugar therefrom, 79.

Pfungst, A., reactions with nitromethane, 1197.

Philip, M., and A. Calm, derivatives of parahydroxydiphenylamine, 155.

Philipp. See Fischer. Phillips, W. B., reversion of phosphoric acid by heat, 615.

Phipson, T. L., caffetannic acid, &c., in Virginia creeper, 1255.

- chemical phenomena of the respiration of plants, 420.

 identity of regianin and juglone, 1142.

Pichard, P., removal of mildew in vines, 590.

Pick. See Weidel.

Pickering, S. U., atomic valency, Proc., 122.

calorimetric determinations of magnesium sulphate, Trans., 100.

- crystalline basic copper sulphate, 1113.

estimation of oil in cattle cake, 844.

heats of dissolution of potassium and lithium sulphates, TRANS., 98. Pilatte. See Mairet.

Pinner, A., action of acetic anhydride on benzamidine, 158.

Pinner, A., action of ethyl acetoacetate on the amidines, 158.

action of ethyl acetoacetate on amidines: pyrimidines, 751.

decomposition of benzonitrile by fuming sulphuric acid, 142.

preparation of tartronic acid, 759.

Pirani, E., galvanic polarisation, 623.

Pistor, C., mineral spring, "Romer-brunnen," at Echzell, Wetterau, 362.

Pistor. See also Naumann. Pitkin, L., action of concentrated sulphuric acid on lead and its alloys, 460. Pitschke. See Klinger.

Piutti, A., derivatives of diphenyl-

aminephthaleïn, 783. diphenylamine-derivatives of succinic acid. 782.

- phthalylaspartic acid, 796.

Planta, A. v., chemical composition of hazel pollen, 182.

Plenge, H. C., aloïn, 808. Plöchl, J., and W. Loë, nitro- and sulpho-derivatives of phenylamidoacetic acid, 899.

Plöchl, J., and L. Wolfrum, condensation of salicylaldehyde with hippuric acid, 898.

Poetsch, W., recovering the waste acids from nitroglycerol works, 619.

Polek and Lustig, derivatives of carvacrol, 659.

Poleck and Samelson, jalapin, 669. Polis, A., aromatic silicon compounds, 973.

Politis, G., relation of phosphoric acid to nitrogen in urine during feeding with brain, 283.

Pollacci, E., spontaneous oxidation of sulphur, 347.

Poncy, C. de, separation and estimation of methyl alcohol in presence of ethyl alcohol, 298.

Pond. See Meyer.

Ponomareff, J., synthesis of allantoxanic acid from parabanic acid, 760.

Pool, F. V., new dropping flask,

Popper, A., decomposition of aqueous solutions of hypochlorous acid and of chlorine in sunlight, 631.

Portele, K., so-called sour-rot of grapes, 1153.

Possettö. See Mazzara. Pouchet, A. G., alkaloïd in Koch's cultivating fluids, 1250.

· changes in the composition of certain secretions during cholera, 576.

Poulton, E. B., essential nature of the colouring of phytophagous larvæ, &c., 1253.

Power, F. B., hydrastine, 675.

Prager, A., derivatives of naphthalene,

Pratesi, L., action of formaldehyde on aniline, 782.

formation of oxymethylene from ethyl nitrate, 504.

rioxymethylene, 240.
Pratt, J. W., rapid estimation of fixed ammonia, 190

Precht. See Röttger. Preece, W. H., charging secondary batteries, 1175.

- new standard of illumination, 321.

Prescott. See Norton. Priebs, B., action of benzaldehyde on nitromethane and nitroethane, 160.

- nitro-derivatives of furfurane.

Primics, G., mineralogical notes from Transylvania, 733.

Proromant. See Carnot. Proskauer. See Fischer.

Provius. See Bury.

Prudhomme, action of bisulphites on chlorates, 207.

Prunier, H., volumetric determination of alumina in lime and cement,

- volumetric estimation of calcium oxide and carbonate, 296.

Przybytek, S., diallyl dioxide, 741. Püttner, preparation of magnesium,

1112.Purdie, T., action of sodium alkyl oxides on ethereal fumarates, TRANS.,

- composition of the milk of the porpoise, 1253.

Pusch, T., test for the presence of tartaric acid in citric acid, 445.

Quantin, H., determination of soluble potash in soils, 1261.

- soil of Tunis, 686.

- some reactions of chromyl dichloride, 23.

Quessaud, J., determination of silver and copper in the same liquid, 441.

#### $\mathbf{R}$ .

Rabot, poisoning by nicotine, 416. Rabourdin, H., adulteration of pepper, 303.

Raby, L., new reactions for codeïne and æsculin, 302.

Rach. See Bischoff.

Radziszewski, B., oxidations by hydrogen peroxide, 496.

Radziszewski, B., and P. Wispek, derivatives of the xylenes, 889.

Raimond, E., volumetric estimation of manganese, 840.

Ramann, E., result of removing débris from the surface of sandy soil, 81.

Rammelsberg, C., analysis of uranium compounds, 690.

- cuprodescloizite, 731.

- double uranium acetates, 648.

matural borates, 28.
Ramsay, W., and J. T. Cundall, nonexistence of gaseous nitrous anhydride, Trans., 672.

- oxides of nitrogen, TRANS.,

Ramsay, W., and S. Young, determination of the vapour pressures of solids and liquids, TRANS., 42.

- influence of change from liquid to solid state on vapour pressures, 629.

- - method for obtaining constant temperatures, Trans., 640.

- - thermal properties of ethyl alcohol, 1178.

Ransom. See Dunstan. Raoult, F. M., action of water on double salts, 122

influence of dilution on the reduction of the freezing point of aqueous

solutions, 858.
Raschig, F., action of bromine on dimethylamine, 1195.

Rasinski, F., fractional distillation in a current of steam, 950.

Rath, G. v., colemanite, 224.

Rath. See also Bodewig.

Rathke, R., nature of selenium sulphide and of alloys, 954.

Ratimoff, antiseptics, 612. Rau, H. M., indigo testing, 934.

Raupenstrauch, G. A., solubility of salts in water at various temperatures, 1181.

Rawson, C., indigo testing, 1015. valuation of indigos, 697.

Rayleigh, Lord, the constant of electromagnetic rotation of light in carbon bisulphide, 325.

Rayleigh, Lord, and Mrs. Sidgwick, electro-chemical equivalent of silver, 469.

Reber, C., fixing artificial dyes by ferro- and ferri-cyanides, 946.

Reboux, E., manufacture of sugar without bye-products, 464.

Rebuffat, O., phenylcinnamylacrylic acid and diphenyldiethylene, 1137.

Recoura, heat of transformation of chromous chloride intochromic chloride, 1102.

· hydrochloride of chromous chloride,

Reder, P., experiments on nitrogen of peat, 188.

 $\mathbf{R}\,\check{\mathbf{e}}\mathbf{e},\,\mathbf{A}$  , eta-sulphophthalic acid, 1062.

Reed, L., action of boric acid on calcium carbonate, 484.

Reese, C. L., analyses of pinite from Madison Co., N. Carolina, 130.

comparative oxidation of solutions of sulphurous acid and sodium sulphite, 217.

estimation of sulphurous anhy-

dride, 296.

Reformatsky, eformatsky, S., preparation of polyhydric alcohols, 882.

the hydrocarbon  $C_8H_{14}$ , prepared from allyl diethyl carbinol, 232.

Regeczy, E. v., diffusion of albumin solutions, 405.

Regelsberger, F. F., ammoniacal compounds of uranyl chloride, 638.

Regnauld, J., and Villejean, inhalation of methane and monochloromethane, 926.

 inhalation of dichloromethane and tetrachloromethane, 926.

oleaginous seeds of the Symphonia fasiculata, 290.

physiological action of dichloromethane compared with that of chloroform, 285.

Reichardt, E., drinking-water supplies, 612.

Reicher, L. T., rate of formation of maleic anhydride, 757.

the temperature of allotropic transformation of sulphur, 346.

Reimer, C. L., and W. Will, fat of the fruit of Myristica surinamensis, 1197.

Reinhardt, C., modified Kipp's hydrogen sulphide apparatus, 1261. Reinke, J., chlorophyll in the living

cell and assimilation of carbon, 182.

 destruction of chlorophyll solution by light, 991.

Reinsch, P. F., chemical composition of coal, 876.

Rémont, A., estimation of the wool, silk, and cotton, in tissues, 96.

Rempel, R., apparatus for the estimation of starch, 843.

Rempel. See Hell.

Remsen, I., action of alcohol on diazocompounds, 525.

 new class of compounds analogous to the phthaleins, 539.

Remsen, I., and E. H. Keiser,

estimation of carbon in ordinary phosphorus, 482.

Reuss, C., density of solutions of pure and commercial aluminium sulphate,

Reychler, A., argentammonium compounds, 18.

Reyer, E., on solidification, 1180. Richard, action of cocaine on the invertebrates, 1002.

Richard, L., estimation of starch in gluten bread, 299.

Richardson, C., chemical alterations in green fodder during ensilage, Trans., 80.

chemical composition of the products of roller milling, 1021.

chemical composition of wheat and maize as influenced by environment, 585.

Richarz, F., products of the electrolysis of dilute sulphuric acid, 624.

Rideal, S., delicate tests for antimony, arsenic, and tin, 1013.

Rieder, H., nitrogen in fæces, 414.

Riehm. See Engler. Riess, C., derivatives of cyanethine,

Riess, C., and E. v. Meyer, cyanmethethine, 646.

Rietsch, biliary acids, 577.

Riets ch. See also Nicati. Rinne, F., milarite, 1187.

rutile from Imfeld, 1186.

Risler, E., influence of temperature on the development of wheat, 422.

Ritter, A., improvement of sheep-manure by kainite, 834. Ritthausen and F. Weger, betaine

and cotton-seed, 50.

Ritzfeld. See Claus.

Rizza. See Butlerow.

Robert. See Brunner.

Robertson, R., albite from Amelia Co., Virginia, 130.

analyses of chrysocolla from Gila Co., Arizona, 130.

blue quartz from Nelson Co., Virginia, 129.

Robin, M., ferric peptonate, 1147.

Robinson, H., atomic weight of cerium,

Rochefontaine. See Peter.

Rodatz. See Stohmann. Röder, F., vinaconic acid, 653.

Roemer, H., amidoalizarin, 1068. Röntgen, W. C., absorption of heat by water vapour, 5.

electro-magnetic action of dielectric

polarisation, 1030. Röse, B., detection of fusel oil in

spirituous liquors, 600.

Röse, B., and E. Schulze, some constituents of Emmenthaler cheese, 207.

Rössing, A., condensation-products of the derivatives of salicylaldehyde, 388. Rössing. See also Otto.

Roessler, C., lead assaying in the wet

way, 596.

Röttger, F., and H. Precht, estimation of sodium chloride in presence of potassium chloride, 1263.

Roll, G., and O. Hölz, benzyl ethers of brominated nitrophenols, 1209.

Romig. See Anschütz.

Rommier, A., cultivated wine-yeast,

Roscoe, Sir H. E., diamond-bearing rocks of South Africa, 131.

spontaneous polymerisation of volatile hydrocarbons, TRANS., 669.

Rose, maize ensilage for cows, 1149. Rosenberg, A., comparative experiments with alkali albuminate, acid albumin, and albumin, 405.

tribromothiophen and compounds of dinitrothiophen, 1051.

Rosenfeld, M., new apparatus for electrolysis, 715.

Rosenhek. See Ostermayer, Schmitt.

Roser, W., diquinoline from benzene,

- phthalyl derivatives, 267, 797. — phthalyl derivatives: conversion

of ketone acids into lactones, 165. - so called phthalylacetamide, 159. Rossmässler, F. A., manufacture

of lubricating oil from Baku naphtha, 620.

Roth. See Ladenburg.

Roth, L., process for solidifying mineral oil, 309.

Rother, R., bismuth and pepsin, 712. Rotondi, saponification of fats by electricity, 1274.

Rousseau, G., manganites of the alkaline earths, 1114.

Rousseau, L., flesh-meal, 620.

Roux. See Friedel.

1252.

Rowan, G. H., apatite from Amelia Co., Virginia, 126.

- kaslinite from Calhoun Co., Alabama, 228.

Rubner, M., acti n of lead acetate on glucose and lactose, 444.

calorimetric investigations, 949,

influence of meat extract on the temperature of the body, 409.

 thermal equivalent of a solution of urea, 328.

Rübencamp, R., aldehyde- and ethylidene-derivatives, 136.

Rüdorf, F., compounds of arsenious oxide, 955.

– lecture experiment, 869.

- solubility of mixtures of salts,

Rüfin, A., first grass and aftermath,

Rühlmann. See Fittig. Runeberg, J. W., filtration of albumin solutions, 567.

Russell, W. J., spectroscopic observations on dissolved cobaltous chloride,

PROC., 67.
Ruys, J. M., allotropic transformation of sulphur at very low temperatures, 346.

#### S.

Saare, O., starch refuse as fodder, 1155.

Saare, O., and others, preparation and investigation of starch, 618.

Sabaneieff, A., diallyl, 495.

Sabatier, P., composition of hydrogen persulphide; a nacreous variety of sulphur, 952.

hydrogen persulphide, 1037.

mineral water of Salies-du-Salat,

Sacc, composition of the seeds of the cotton-tree, 425.

saltpetre deposit, 359.

Sachs, F., and R. de Barbieri, influence of the lead precipitate on polarisation, 694.

Sachs, J., activity of assimilation by leaves, 289.

- metastasis in leaves, 831. Sachs. See also Warburg.

Sachsse, R., a new colouring matter from chlorophyll, 670.

- chlorophyll, 670.

Sagnier, H., straw, peat, and sawdust as litter, 429.

St. André. See Boursier.

Sakurai, J., methylene chloriodide, Trans., 198.

Salkowski, E., behaviour of skatole-carboxylic acid in the organism, 575.

— composition of horses' urine, 924. — decomposition of proteïds by

fermentation, 998. - phenaceturic acid in the urine of

the horse, 413. Salkowski, E. and H., putrefaction of albumin and formation of skatole and indole, 567.

— skatolecarboxylic acid, 569.

Salkowski, H., melting points and separation of mixtures of phenyl-

acetic and hydroxycinnamic acid, 602.

Salomon, G., chemical composition of pig's urine, 413.

paraxanthine, 403.

Salomon, W., distribution of ammonium salts and formation of urea,

Salomonson, H. W., nitrophenyl-paraconic acid, 1224.

Sambuc, milk adulteration, 299.

Sandberger, F., boric acid in mica,

- fairfieldite from Rabenstein, 640.

– manganese in apatite, 640.

Sandmeyer. T., conversion of the three nitranilines into nitrobenzoic acids, 981. -conversion of the three nitro-

benzoic acids into phthalic acids, 981.

ethyl hypochlorite, 1045.

--- substitution of the amido-group in aromatic derivatives, by chlorine, bromine, and cyanogen, 149.

Santini, S., coloration of the hydrogen flame, 209, 465.

Sardo, catalpic acid, 272.

Savary, W., atripaic acid, 653.

Sawano. See Kellner.

Saytzeff, A., oxidation of oleic acid,

synthesis of tertiary alcohols from ketones, 881.

Scacchi, E., crystallography of phenylcoumarin and coumarin, 901.

Schacherl, G., synthesis of a new tetrabasic acid and an isomeride of aconitic acid, 1125.

Schaeffer, C. A., a new tantalite locality, 359.

Schafarzik, F., native mercury, cinnabar and chromium ores from Ser-

via, 730. Schall, C., attraction of homogeneous molecules, 111.

modification of Petterson and Ekstrand's method of vapour-density determinations, 1179.

- relation between capillarity and specific gravity of members of homologous series, 1180.

relation between molecular weight and velocity of evaporation of liquids,

 relation between specific gravity, capillarity, and cohesion, 1180.

relations of diameters of molecules,

-relation of expansion of substances in gaseous, vaporous, and liquid states to absolute temperature,

Schall, C., and C. Dralle, action of

chlorine, bromine, and iodine on sodium paracresolate, 145.

Scharges. See Traub.

Scharizer, R., constitution of the amphiboles containing alumina, 32.

Schatzky, E., action of allyl and isobutyl iodides on zinc and acetone, 237.

- diallyloxalic acid, 511.

 preparation of ethylic oxalate, 512.

Scheffer, estimation of nicotine, 604. Scheibler, C., raffinose, 1046.

nomenclature of sugars, 744.

--- separation of raffinose from the molasses of beetroot sugar, 962.

Schenfelen. See Meyer.

Scherks, E., hydrindonaphthenecar-boxylic acid, 533.

 hydroxymaleic and hydroxycitraconic acids, 513

Schestakoff, W., composition of a bye-product obtained in the preparation of diallyl carbinol, 237.

Scheurer, A., dyeing with alizarine on indigo, 711.

- fixation of alumina as a discharge on indigo-blue, 1276.

history of alizarin-blue, 106.

Scheurer-Kestner, composition of the gas from pyrites burners, 199, 706. - composition and heat of combustion of coal from Ruhr, 1020.

- heat of combustion of the coal of

Ronchamp, 848.

reaction between ferric oxide and certain sulphates at high temperatures, 125.

employment of Körting's - the apparatus for forcing gases through sulphuric acid chambers, 1166.

Schichowsky, composition of maize,

Schiff, H., aspartic acid, 377.

--- isophloridzin, 1142.

- lecture experiments on the occlusion of hydrogen by palladium, 1035.

 oxaldiamidopropionic acid, 760. — phosphorsellinic acid, 795.

Schiff, H., and C. Parenti, ethyleneamidobenzoic acid, 266. Schiff, H., and E. Pons, an amide of

gallic acid, 796.

Schiff, H., and R. Sestini, com-pounds of arsenious anhydride with potassium bromide and iodide, 723.

Schiff, R., constants of capillarity of liquids, 717.

estimation of the specific gravity of liquids at higher temperatures, 950.

Schiff, R., physical properties of thiophen, 971.

Schiller-Wechsler, M., anilidopyrotartaric acid, 900.

Schilling, É., caffeine methylhydroxide, 674.

Schilling. See also Schmidt.

Schimidzu. See Divers.

Schimosé. See Divers.

Schimoyama, Y., estimation of quinine, 935.

Schindler, F., valuation of hay, 1154.

Schlagdenhauffen, volumetric determination of manganese, 442.

Schlagderhauffen and Garnier, arsenic in the soil of cemeteries, 1009.

Schlagdenhauffen. See also Heckel. Schlegel, G., combustion of hydro-carbons and their derivatives with mixtures of oxygen and chlorine,

Schlerschmann. See Carnelley. Schloesing, T., magnesia industry, 1166.

Schmalzigaug. See Graebe.

Schmelck, L., investigation of petroleum lamps, 452. Schmid, H., turkey-red oil, 313.

Schmid. See also Goldschmidt. Schmidt and Hänsch, disturbing phenomena observed in polarising operations, 321.

Schmidt, A., isomorphism of jordanite and meneghinite, 639.

- water vapour in gas generators, 705.

Schmidt, E., and E. Schilling, caffeine, 995.

Schmidt, M. See Leuckart. Schmitt, C., and J. Rosenhek, gallisin, 134.

Schmitt, E., composition of butter from cows, goats, and ewes' milk, 309.

Schmitt, R., Kolbe's synthesis of salicylic acid, 982.

preparation of salicylic acid, 709.

Schmitt. See also Hansen. Schmitz, S., modification of the calcium chloride drying tube used in elementary analysis, 687.

Schmöger, M., milking of cows,

polarimetric estimation of sugar in milk, 693.

butter-fat - Soxhlet's areometric estimations, 603.

Schneegans, A., Perkin's reaction in the paraffin series, 649.

Schneider, L., wolfram, 1187.

Schneider, L., and F. Lipp, analysis of tungsten steel, 840.

Schneider, R., action of silver cyanide on sulphur chloride, 1193.

 atomic weight of bismuth, 354. - precipitation of halogen salts of silver, 1010.

Schoene, E., spectrum of ozone, 713.

Schöne, H., chlorocarbonylsulphamyl,

Schöpff, M., derivatives of metanitrobenzenylamidoxime, &c., 1217.

- metanitrobenzenylamidoxime, 896. Scholvien, L., mercury fulminate,

Schoor, W. K. J., action of certain substances on dextrin, 369.

Schorlemmer, C., thionyl chloride, Proc., 52.

Schotten, C., oxidation of piperidine,

Schotten, C., and J. Baum, a new oxidation-product of conine, 176.

Schramm, J., formation of parabromobenzyl bromide by the action of bromine on parabromotoluene, 379.

- influence of light on the action of the halogens on aromatic compounds,

- influence of light on the bromination of aromatic compounds, 888.

- influence of sunlight on the bromination of aromatic compounds, 518.

Schrauf, A., dispersion equivalent of the diamond, 14.

Schreder, J., the constitution of isuvitic acid, 798.

Schreder. See also Barth.

Schreiner, peat as manure, 428. Schrodt, M., new conserving agent for milk and butter, 612.

- quality of butter made by different processes, 105.

Schrodt, M., and H. Hansen, feeding milch cows with ensiled sugarbeet sections, 833.

- --- influence of malt coombs on the yield of milk, 929.

Schroeder, J. v., and another, influence of acid smoke on vegetation, 76. Schubert, S., action of heat on starch

granutes, 368. Schübeler, action of long days on

vegetation, 419. Schüchtermann, H., working up

basic slag, 940.

Schüle. See Hell.

Schüpphaus, R., action of chlorine on boiling benzene, 52.

Schütt, F., parabromorthamidophenol, 1211.

Schütz, E., quantitative relationship of pepsin to peptones, 1147.

Schulten, A. de, artificial production of strengite, 1043.

crystallised magnesium and cadmium hydroxides, 1183.

 new crystallised magnesium phosphate and arsenate, 724.

Schultz, B., oxidation products of solid dibromoparaxylene, 1053.

Schultz, J. J., alkaloïds of Coptis trifolia, 403.

Schulz, O., action of acetic, propionic, and butyric acids, &c., on benzenylamidoxime, 897.

action of anhydrides of bibasic acids of benzenylamidoxime, 1219.

Schulze, B. See Weiske.

Schulze, E., acid amides from the decomposition of albumin, 581.

amido-acids formed from albumin, 916.

- determination of asparagine and glutamine, 935.

 formation of sulphates in germination, 1153.

Schulze, E., and E. Bosshard, allantoin, asparagine, hypoxanthine, and guanine as plant constituents, 1007.

- occurrence of glutamine in the sugar-beet, 759.

optical behaviour of some amidoacids, 759.

Schulze. See also Lunge, Rose.

Schulze, H., pyrosulphates, 216.

Schulze, K. E., method of obtaining thiophen and its homologues, 763.

- occurrence of benzoic acid in coaltar oils, 792.

- phenols of high boiling point contained in coal-tar, 667.

 simple method of obtaining thiotolen and thioxylen, 251. Schumann, O., boiling point and

pressure, 1176.

Schunck, E., chlorophyll, 1241.

Schwackhöfer, F., calorimetric estimation of fuels, 691.

Schwalbe, F., non-acid constituents of beeswax, 962.

Schwarz, C., Roman alunite, 307.

Schweissinger, O., detection of atropine, 448.

 iodised tannic acid as a reagent, 691. Schweizer, A., arachidic acid and nondecylic acid, 508.

Schwenk. See Böhm.

Sebelien, J., the proteïds of cow's milk,

Sée, G., and Bochefontaine, physiological action of cinchonamine, 682.

Sée, G., and Bochefontaine, physio-

logical effect of cinchonamine sulphate, 571.

Seegen, J., sugar in blood: its source and signification, 411.

Seelig, E., trichlorotoluenes, 769.

Seemann, B., preparation of soaps from oil seeds, 1023.

Seifert, R., action of carbonic anhydride on sodium acetanilide: new synthesis of dicarboxylic acids, 983.

- action of sodium mercaptide on phenyl salts, 1057.

- formation of amines from the amides of the fatty series, 963.

Semper. See Bernthsen.

Senf, A., cyananiline and some of its derivatives, 1060.

Senff, M., dry distillation of wood, 619.

Senhofer, C., sericite from the quartzphyllite of Wiltau, 736.

Senier, A., formyl and thioformyl compounds obtained from aniline, &c., Trans., 762.

Serrant, E., aseptol, 1166.

orthohydroxybenzenesulphonic acid, 1016.

Sestini, F., relations between atomic weight and physiological function, 1150.

Sestini, F., and A. Dicocco, maize heads as fodder, 1087.

Sestini. See also Schiff.

Seubert. See Meyer.

Shalféeff, M., specific volumes of chlorine, bromine, and iodine in carbon compounds, 717.

 preparation of hæmin, 566. Shenstone, W. A., brucine, 276.

crystalline tricupric sulphate, Trans., 375.

· modified Bunsen burner, Trans., 378.

- strychnine, Trans., 139.

Shenstone. See also Tilden. Shimoyama, Y., estimation of the quinine alkaloïds, 845.

Short. See Dunstan.

Sidgwick. See Rayleigh.

Sieben, J., composition of starch syrup and of honey, 693.

Sieber. See Nencki.

Siebold, L., estimation of hydrocyanic acid, 600.

Siegfried, oxidation of phenol by nitrobenzene, 1060.

Siemens, W., a unit for the measurement of light, 1.

Siewert, creaming by centrifugals on various systems, 1022.

Silber. See Ciamician.

Silberstein, H., betaïnes, 160.

Silva, R. D., aromatic hydrocarbons, 1054.

 formation of normal propylbenzene, 972.

Simand. See Kohnstein.

Sjögren, H., manganese arsenates from Nordmarken in Wermland, 959.

Skraup, Z. H., benzoyl-ecgonine and its conversion into cocaïne, 1249.

new method of preparing phenanthroline, 393.

Skraup, Z. H., and O. W. Fischer, methylphenanthroline, 392.

Slocum, F. L., phenylangelic, phenylmethacrylic, and ethylphenyllactic acids, 662.

Smith, A., preparation of carbons for electric lamps, 1267.

Smith, E. F., mineralogical notes, 960.

Smith, E. G., action of bromine on propenylphenylaminediamine, 524.

- chrysotile from Shipton, Canada, 361.

Smith, F. S., ozocerite, 356.

Smith, H. E. See Chittenden. Smith, J. L., methods of estimating columbates containing earthy oxides, 1012.

Smith, R. Angus, examination of waters, 86.

Smith, W. See Staub. Smith, W. G., composition of the precipitate obtained on heating urine, 681.

Smolka, A., basic nitrates of lead, 725.

- mannitol lead nitrate, 743.

Smolka. See also Kahlmann.
Snape, H. L., action of phenyl cyanate on alcohols and phenols, Trans., 770.

Soden. See Michaelis.

Sokoloboff, new anhydride of mannitol, 367.

Solonina, V., action of dilute acids on allyl alcohol, 741.

Solvay, E., obtaining hydrochloric acid from calcium chloride, 705.

 $\mathbf{Sommerlad}, \mathbf{H}.$ , leucite- and nephelinebasalt from the Vogelsberg, 33.

Sonnenschein, A., behaviour of tannin with Fehling's solution, 1163.

Sorabji, B., on some new paraffins, Trans., 37.

Soret, C., refractive indices of alums, 109, 1097.

Sostegni, L., examination of humus from peat, 1082.

Soubeiran, L., and G. Massol, water from the Red Spring of Zacaune (Tarn, France), 232.

Soye. See Brouardel.

Spalteholz, W., quinoline dyes, 400. Spencer, G. L., new method of deter-

mining phosphoric acid in manures,

Spica, P., Barosma crenata, 1142.

Spica. See also Canzoneri.

Spiegel, A., new class of aromatic sulphonic acids, 987.

Spielhoff, H., chemistry of urine,

Spitz, G., mixed ethers of resorcinol, 381.

Spitzer. See Kachler. Spohn. See Dragendorf.

Spohr, J., action of neutral salts and of temperature on the inversion of cane-sugar, 1181. Sponnagel, F. G., enamelling casks,

316.

Spring, W., action of mass, 480.

Stadelmann, E., pathological acid in diabetic urine, 924.

Stadler, O., compounds of thiophen,

- nitrothiophens, 764.

--- reduction of nitro- to amido-thiophen, 971.

Stadler. See also Meyer.

Stadthagen, cystine not present in normal urine, 830.

Staedel, W., dinitrotoluene, 142.

Starkl, G., schuchardtite, 32. Staub, A., and W. Smith, derivatives of isodinaphthyl, Trans., 104.

Staute, H., pinnoite, a new borate from Stassfurt, 1117.

Stegelitz. See Claus. Stein, S. v., method of obtaining hæmoglobin crystals, 406.

Steiner, E., formation of patina, 308.

Stenger, F., electric conductivity of gases, 1028.

thermal conductivity of tourmaline, 5.

Stevens. See Hill.

Stocklasa, J., distribution of phosphates in Bohemia, 877.

Stockmann, R., active principle of senna leaves, 991.

Stohmann, F., calorimetric investigations, 857.

Stohmann, F., and P. Rodatz, heat of combustion of lauric and myristic acids, 1176.

Stohmann, F., and H. Wilsing, specific and latent heats of myristic and lauric acids, 1177.

Stojentin, M., action of ethyl oxalic chloride on derivatives of carbamide and guanidine, 1195.

Stokes, G. G., crystalline reflection in potassium chlorate, 1175.

Stokes, H. See Pechmann.

Stokes, H. N., phthalic sulphinide,

Stokvis, B. J., turbidity of albuminous urine on heating, 680.

Stolba, F., preparation of zinc free from arsenic, 461.

Stracciati. See Bartoli.

Strebel and others, cultivation and preservation of certain cereals, 833.

Strecker, K., reproduction of Siemens' mercury unit, 1027, 1099.

Streng, A., diopside from Zermatt, 1118.

microscopic chemical reactions, 294.

Striegler, M., ammelide, 1194.

Strohmer, F., testing of cayenne pepper, 452.

Strüver, J., columbite from Caraveggia, Piedmont, 732.

Struve, H., studies on blood, 71. Stuart, C. M., nitrobenzalmalonic acids, Trans., 155.

Stutzer, A., phosphoric acid soluble in the soil, 439.

- nitrogenous substances insoluble in gastric juice, 827.

Suchorsky, N., respiration in compressed air, 677.

Suida. See Liechti.

Sundberg, C., the pepsin ferment,

Sweetser. See Kinnicutt. Szechenyi, E. v., jun., cultivation of Sorghum saccharatum, 833.

Szymanski, F., hemialbumose from vegetable albumin, 997.

— malt peptone, 822.

Szymanski. See also Deichmüller.

## T.

Tafel, J., benzoyl-derivatives of phenylhydrazine, 1060.

Tafel. See also Fischer, Paal.

Takayama, J., Japanese teas and tobaccos, 582.

Tammann, G., fate of sulphur in germination, 1004.

- tension of aqueous vapour of salt solutions, 862.

Tanret, C., alkaloïds produced by the action of ammonia on glucose, 1047.

cornutine and ergotine, 821.

— terpinol, 990.

- vincetoxin, 552.

Tappeiner, H., researches on the fermentation of cellulose, especially with reference to its solution in the alimentary canal, 178.

Taquet, C., preparation of chlorine, 1017.

Taüber. See Fischer.

Tautphous, C. v., and E. Wollny, influence of different systems of applying manures, 1156.

Taylor, W. J., detection of cyanides in presence of compound cyanides, 196.

Teed, F. L., decomposition of potassium chlorate by heat, Proc., 105.

- estimation of iodides in presence of chlorides and bromides, 1261.

Teixeria, S. F., a new alcoholic ferment which does not invert sugar,

the succinic acid ferment and its action on cane-sugar, 1152.

Terreil, A., analysis of chrysotile,

 crystallised argentammonium chloride and bromide, 18.

- red colouring matter of wine and vegetables, 1142.

Terrisse, naphthalfluoresceïn naphthaleosin, 667.

Tessmer, H., compounds of polyhydric alcohols with phenyl cyanate, 774.

Thaer, nitrogen necessary for cultivated plants, 75.

Thierfelder, H., and J. v. Mering, physiological action of the tertiary alcohols, 1002.

Thöl, A., symmetrical metaxylidine and symmetrical xylenol, 522.

Thompson, C. See Wright. Thomsen, J., constitution of thiophen,

1126. molecular weight of fluid water,

870.Thomson, A., colorimetric estima-tion of small quantities of iron, Trans., 493.

Thomson, A. See Carnelley.

Thomson, J. J., combination of gases,

Thomson, R. T., lakmoïd and other

indicators, 1157. Thorne, L. T., conversion of ketonic acids into unsaturated lactones, 1200.

Thorner, W., apparatus for collecting and analysing the gases dissolved in water, 691.

Thorpe T. E., atomic weight of titanium, TRANS., 108.

- sulphides of titanium, TRANS.,

Thoulet, J., attraction between dissolved substances and solids immersed in the solutions, 476, 866.

— determination of the coefficient of

cubic dilatation of minerals, 218.

- Thoulet, J., and H. Lagarde, new method of determining specific heats,
- Thresh, J. C., new form of apparatus for continuous percolation with boiling liquids, 835.

proximate constituents of Hedychium spicatum, 582.

Thümen, F. v., fairy rings, 425.

- Tichomiroff, A., chemical changes attending the development of the embryo in the eggs of Bombyx mori, 1000.
- chemical changes in the eggs of Bombyx mori during development, 1150.
- Tiemann, F., amidoximes and azoximes, 895.
- glucovanillin and glucovanillyl alcohol, 980.
- · reactions of amidoximes, 1216.
- Tiemann, F., and A. Kees, glucosides prepared from helicin, 1073.
- reactions of the glucosides, helicin and glucovanillin, 1072.
- Tiemann, F., and P. Krüger, relation of benzenylamidoxime-derivatives to the benzhydroxamic group, 790.
- Tiemann, F., and E. Nageli, action of sodium amalgam on aqueous solutions of benzenylamidoxime, 895.
- Tiffereau, action of direct sunlight on nitric acid mixed with carbon bisulphide, 1110.
- Tilden, W. A., and W. A. Shenstone, solubility of calcium sulphate in saline solutions, 1183.
- Timiriazeff, C., chemical action of light on chlorophyll, 714.
- Tissandier, G., apparatus for the constant production of gas, 722.
- Tivoli, D., compounds of platinum and arsenic, 728.
- Tollens, B., circular polarisation of dextrose, 40.
- · raffinose (melitose?) from molasses, 368.
- ollens. See also Deichmüller, Herrmann, Kent, Kreckeler. Tollens.
- Tomlinson, C., boiling of liquids in a vessel contained in a water-bath, 474. motions of camphor on water, 1180.
- electro-pseudolysis, Tommasi, D., 1029.
- heats of formation of hydrogen compounds, 716.
- heat of formation of some soluble compounds and the law of thermal substitution constants, 8.
- non-existence of ammonium hydroxide, 484.

- Tornani. See Vitali.
- Traub, M. C., and C. Hock, a lak-moid, 148.
- Traub, M. C., and C. Schärges, coaltar quinoline, 173.
- Traube, H., nephrite frem Jordansmühl, in Silesia, 361, 1189.
- Traube, J., capillary constants of certain aqueous and alcoholic solutions,
- capillary phenomena in relation to constitution and molecular weight,
- influence of temperature on the capillary meniscus angle, 1033. - preparation of cyanamide, 739.
- Traube, M., co-operation of water in the combustion of carbonic oxide, and formation of hydrogen peroxide during such combustion, 1108.

co-operation of water in the slow oxidation of zinc, lead, iron, and pal-

- ladium-hydrogen, 1105.

  formation of hydrogen peroxide during the combustion of hydrogen, 1108.
- slow oxidation of copper in presence of dilute sulphuric acid or of a solution of ammonium carbonate, 1107.
- Trey, H., basicity of thiosulphuric acid, 870.
- Tribe. See Gladstone.
- Trinius, P., derivatives of hydratropic acid; artificial formation of phloretic acid, 529.
- Trobach, K., new method of sugar extraction, 848.
- Troilius, M., estimation of manganese and phosphorus in iron and steel,
- Troost, L., remarks on some criticisms of Friedel's concerning chloral hydrate, .746.
- thorium metaphosphate, 1113.
- vapour-density of thorium chloride, 1113.
- Troschke, composition of furze (Ulex europæus), 684. - cultivation and composition of sor-
- ghum, 1155.
- preservation of ammonia in stable manure, 187.
- water culture of lupines, 420.
- Trowbridge, J., measurement of strong electric currents, 855.
- of Truchot, C., thermochemistry ammonium fluosilicate, 626.
- Tscheltzow, heat of formation of picrates, 1103.
- Tschermak, G., proportion of chlorine in scapolite, 1187.

Tscheuschner, E., calculation of glass batches, 937.

Tschirch, A., Hyacinthus orientalis,

Turner, T., estimation of carbon in iron and steel, 1161.

- influence of silicon on the properties of cast iron, TRANS., 577, 902.

- selective alterations of the constituents of cast iron, TRANS., 474.

#### υ.

- Ulbricht, R., estimation of tannins by Lowenthal's method, 934.
- wine analysis, 692. Ullmann, C., derivatives of triphenylmethane, 1236.
- Ulsch, K., decomposition of ethyl chlorocarbonate by zinc chloride,
- Unger, B., analysis of vulcanised caoutchouc, 841.

Urbain. See Fremy. Urech, F., influence of the diluent on the rate of chemical action, 480.

- influence of temperature and concentration of hydrochloric acid on the rate of inversion of saccharose, 41.

## ٧.

Valenta, E., testing mineral oils, 93.

– toilet soap analysis, 696. Valentini, A., lecture experiments, 215.

 paramethoxyphenoxycinnamic acid, 264.

Van der Plaats, J. D., atomic weights of carbon, phosphorus, tin, and zinc,

Vandevelde, G., chemistry of Bacillus subtilis, 287.

Van de Vyvere, estimation of methyl alcohol in ethyl alcohol, 600.

Van Dorp. See Hoogewerf. Van Herff. See Dabney.

Van Romburgh, P., non-existence of pentanitrodimethylaniline, 660.

van't Hoff, H., jun., malic acid, 1201.

van't Hoff, J. H., the "critical point" in chemical decompositions,

- transformations of sulphur, 1037. Veley, V. H., sulphur compounds of calcium, TRANS., 478.

Venable, F. P., leaves of Ilex cassine, 1254.

zinc in drinking water, 453.

Verbeck, R. D. M., pyroxene-andesites from the Dutch Indian Archipelago,

Verneuil, A., seleniocarbamide, 50, 376.

 simultaneous action of oxygen and hydracids on seleniocarbamide, 967.

Vieille. See Berthelot. Vieth, P., composition of mares' milk and koumis, 849.

Vigier, F., orthophenolsulphonic acid, a new antiseptic, 612.

Vigier, P., digestive ferments, 279. Vignon, P., separation of aluminium and iron, 689.

Ville, J., crystallised zinc hydroxide, 1112.

Ville. See also Engel.

Villejean. See Regnauld. Villiers, A., curarine from Strychnos toxifera, 997.

- formation of alkaloïds in disease,

 formation of ptomaïnes in cholera, 404.

- nitro-derivatives of ethylene, 1044. — pathological urines, 1084.

Vincent, C., new iridium compounds,

vincent, C., and J. Chappuis, critical temperatures and pressures of some vapours, 1104.

- \_\_\_tension and critical points of some vapours, 861.

Violle, J., absolute unit of light, 622. Vitali and Tornani, detection of

chloral hydrate, 933.

Vivier, A., apatite from Lognozan (Spain), 30.

Voelcker, A., action of soluble and insoluble phosphates, 82.

- four-course system at Woburn, 78.

Vogel, A., detection of cyanogen, 297. Vogel, H. W., modifications of silver bromide, 846.

Vohwinkel, E., new constant galvanic element, 853. Voigt, K., benzoinanilide and its deriva-

tives, 1067.

Voigt, R.,  $\beta$ -pyridinetricarboxylic acid,

Voigt, W., colour phenomena of pleochroic crystals, 621.

- optical properties of thin metallic layers, 1026.

Voit. See Munck.

Volhard, J., and H. Erdmann, synthesis of thiophen, 763.

Volkmann, P., remarks on Schiff's paper on the capillary constants of liquids, 721.

Vorster and Grüneberg, working up the mother-liquors from schoenite,

Vortmann, G., cobaltammonium compounds, 1041.

Vulpius, G., thallin preparations, 398.

# W.

Wachtel, G., manufacture of potassium dichromate, 846.

Wackenroder, D., preparation of strontium and barium chlorides, 19.

Wada, Japanese minerals, 221.

Wäyss. See Gasiorowski.

Wagner, composition of wood ashes, 834.

- manuring with peat, 1009.

Wagner, E., action of zinc organometallic compounds on aldehydes, 370. Wagner, G., oxidation of ketones, 1197.

Wagner, H. See Kruckenburg. Wagner, P., estimation of nitrogen in Chili saltpetre, 435.

- metamidophenetoïl, 1212.

Wagner, P., and others, various manure materials, 1156.

Wallach, M., carbonates of dihydric alcohols and phenols, 254.

Wallach, O., ethereal oils, 171. terpenes and ethereal oils, 550.

Wallach, O., and W. Brass, Oleum cynæ, 171.

Walter, J., apparatus for chemical laboratories, 631, 1035.

- use of steam in chemical laboratories, 482.

Wanklyn. See Fox.

Warburg, L., and J. Sachs, relation between the density and viscosity of liquids, 9.

Warden, C. J. H., biological examination of water, 1266.

Warington, R., action of gypsum in promoting nitrification, TRANS., 758. behaviour of nitrates in Kjeldahl's method for the determination of nitrogen, 1261.

detection of nitrous and nitric

acids, 593. Wartha, V., alkaline reaction of glass,

Wasmund. See Maas.

Wassermann. See Le Bel. Weber, A., and N. Wolff, perchlorophenol from perchlorobenzene, 519.

Weber, C. L., electric conductivity of amalgams, 211.

electric conductivity and temperature coefficient of solid mercury, 1028.

Weber, R., octosulphates, 121.

Webster, C. S. S., chlorination of phloroglucol, Trans., 423.

Weddige, A., derivatives of orthamidobenzamide, 661.

Weddige, A., and M. Körner, polymeric dichloracetonitriles, 739.

Weger. See Ritthausen

Wehsarg, K., iodic anhydride, 346. Weidel, H., and K. Hazura, hydrocompounds of cinchoninic acid, 561.

Weidel, H., and B. Pick, compounds from animal tar, 556.

Weigelt, C., estimation of wine extract, 602.

Weigle, T., presence of chlorine in potassium bromide, 723.

Weinberg, A. M., kaolin deposits of south-west Russia, 879.

Weinberg. See also Friedlander.

Weingärtner. See Nölting. Weinreb, C., cryolite glass, 1019.

Weinreb, C., and S. Bondi, titration of phenol with bromine, 1266.

Weinreb. See also Lauber.

Weinstein, L.,  $\alpha$ - and  $\beta$ -hydropiperic acids, 664.

Weiske, H., and B. Schulze, influence of certain amides on the animal organism, 409.

Weiske, water culture of lupines, 420.

Welch, J. C., limonite, 1116. Weldon, W., preparation of chlorine

from magnesium oxychloride, 1016. Wells, J. S., estimation of phosphoric

acid in fertilisers, Trans., 185. Welsbach, A. v., the rare earths, 350.

Welsh. See Pechmann.

Weltner, A., action of phenylbromacetic acid on ethyl acetate, 793.

Wense. See Kleemann. Werner, E., bromoxytribromophenol,

658.

Werner. See also Berthelot.

Werth. See Osmond.

Werveke, L. v., ottrelith rocks of Attré and Viel-Salm, 961. Weselsky, P., and R. Benedikt,

resorcinol dves, 526.

Wesendonck, K., diathermancy of esculin, 213.

Weyl, T., nitrates in urine, 413. Weyl. See also Frenzel.

Wichelhaus, H., crystalline from methyl violet, 895.

Widmann, O., argentammonium phosphate, 18.

Widmann, O., nitrocumenylacrylic acids and their derivatives, 55.

Wiedemann, E., and C. Lüdeking, thermal phenomena of colloids, 1031.

Wiederhold, B., levonic acid, 653.

Wiegand. See Beilstein. Wieland, J., electrolytic estimations,

Wiessner, J., the gum ferment, 1241. Wietersheim and others, loss of sugar in beetroots when stored, 102.

Wilber. See Austen.

Wild. See Nölting. Wildt, E., removal of the bitter principle from lupines, 184.

Wiley, H. W., determinations of lactose in milks by optical methods, 601. - maple sugar, 499.

Wilfarth, H., modification of Kjeldahl's method of estimating nitrogen,

Wilkes, J. F., decomposition of potassium cyanide, 495.

Wilkinson, E., occurrence of native

mercury in Louisiana, 876.
Will, W., naringin, 906.
Will, W. W., apparatus for continual percolation with boiling liquids, 631.

Willgerodt, C., application of various substances as halogen carriers, 1034.

- α-dinitrophenyl thiobenzoate, and the ethers of dinitrophenol mercaptan, 519.

paranitrophenyl mercaptan and paranitrophenyl disulphide, 519. - trinitrobenzenesulphonicacid, 1232.

Willgerodt, C., and P. Mohl, unsymmetrical metadinitrobenzenesulphonic acid, 665.

Willgerodt, C., and A.Müller, acetone chloroform, acetone bromoform, and

wetone iodoform, 648.

Williams, C. T., influence of culture fluids and reagents on the growth of Bacillus tuberculosis, 578.

Williams, G., occlusion of hydrogen by zinc-dust, 634.

trimethylamine and pyrroline from coal-gas, 369.

Williams, G. H., paramorphosis of pyroxene to hornblende in rocks, 492.

Williams, R., testing aniline hydrochloride, 446.

Williams, W. J., treatment of redonda phosphate, 1018.

Wilm, new rhodium salts, 355.

Wilm, V. v., estimation of fat in palmnut meal, 290, 1164.

Wilsbach, C., separation of didymium into its elements, 1113.

Wilsing. See Stohmann.

Wing. See Michael.

Winkelmann, A., diffusion of gases and vapours, 10.

- diffusion of homologous ethereal salts, 10.

- time of existence of thiosulphuric acid in aqueous solution, 722.

Winkler, C., change of arsenious oxide from the amorphous to the crystalline condition, 871.

Wirtz. See Anschütz.

Wislicenus, J., reactions of chlorether, 366.

reduction of phthalic anhydride by zinc and glacial acetic acid, 57. Wislicenus, W., action of potassium

cyanide on phthalide, 532. Wispek and Zuber, formation of nor-

mal propylbenzene, 972.

Wispek. See also Radziszewski. Witt, C. See Claus.

Witt, O. N., new series of dyes, 945.

nitroso-derivatives of aromatic amines, 782.

tannin method of fixing colours on cotton, 1024.

Witt. See also Nölting.

Wittenberg, azophenylacetic acid, 661. Wittich. See Elbs.

Witting, F., Chilian boronatrocalcite,

Witz, A., calorific power of coal-gas,

 combustion of mixtures of coal-gas and air, 857.

Witz, G., sulphurous anhydride in the air of towns, 953.

Wheeler and Ludeking, new blowpipe reagent, 596.

Wolff, E., and others, digestibility of clover and meadow hay by the horse and sheep, 411.

- digestibility of lucerne and clover hay by the horse and sheep, 410. - digestibility of potatoes and carrots with hay and oats by the horse,

72.Wolff, J. E., nepheline rocks of the United States, 230.

Wolff, L., derivatives of levulinic acid, 1123.

Wolff, N. See Weber. Wolfrum. See Plöchl.

Wollner. See Claus. Wollny, E., absorptive and evaporative powers of various litters, 1008.

- influence of the position of the set on the potato crop, 586.

· influence of the soil and its cultivation on the temperature and moisture of the air, 81.

micro-organisms in the soil, 426, 683.

Wollny, E., protective influence of growing plants on the undergrowth, 77.

Wollny, E. See also Tautphöus. Wollny, R., analytical operations and

apparatus, 591, 835.

Wood, J., and J. L. Borden, action of ammonia on the halogen salts of lead, 1114.

Wooldridge, L. C., fibrin ferment in blood, 1253.

- origin of the fibrin ferment, 571.

Woringer, L., camphanic acid, 668. Wright, C. R. A., and C. Thompson, determination of chemical affinity in terms of electromotive force, 325,721.

Wright, L. T., illuminating power of

methane, TRANS., 200.

Wroblewski, S.v., electrical resistance of copper at very low temperatures. Insulating properties of liquid oxygen and nitrogen, 1099.

phenomena which accompany the evaporation of the permanent gases in

a vacuum, 861.

production of low temperatures by means of liquid oxygen, nitrogen, &c.,

Wroblewsky, E., decomposition of diazo-compounds by alcohol, 257.

Würthner. See Lellmann.

Kirchner, Oberbock-Wüst and struck's milk refrigerator, 1022.

Wurtz and Henninger, action of ethyl chlorocarbonate on potassium cyanate, 968.

Wyrouboff, G., dispersion of sodium chromate, 211.

## Y.

Yoshida, H., constituents of camphor oil, TRANS., 779.

Young. See Ramsay.

## Z.

Zaboudsky, hydrate of carbon from cast-iron, 42.

Zacharewicz. See Audoynaud.

Zaleski, G., new reaction of carbonic oxide hæmoglobin, 825.

Zanni, J., tests for butter, 695.

Zehenter, J., action of phenol and sulphuric acid on hippuric acid, 55,

Zepharovich, V. v., mineralogical notes, 641.

Zepharovich.

See also Moore. Zikes, H., butenylglyceryl chlorhy-drins, 1046.

Zimmermann, J., and A. Müller, new synthesis of pararosaniline, 386. - paranitrobenzylidine chloride, 771.

Zincke, T., action of the amines on quinones, 787.

Zincke, T., and H. Bindewald, phenylhydrazine derivatives of α- and  $\beta$ -naphthaquinone, 391.

Zincke, T., and A. Breuer, the hydrocarbon C16H12 from styrolene alcohol, 269.

Zincke, T., and A. Heberand, action of quinones on amidophenols, 257.

Zolla, D., use of potassium chloride in agriculture, 588.

Zuelzer, W., estimation of chlorine in human urine, 608.

Zürcher, K., formation of aniline black, 1276.

Zürrer, R., campholenic acid. 1241. Zürrer. See also Goldschmidt.

Zulkowsky, C., estimation of the

halogens in organic compounds, 1162. Zulkowsky, C., and C. Lepéz, esti-mation of the halogens in organic

compounds, 591.

Zwilling, K., correct time for the honey harvest, 590.